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RESERVE

U.S. DEPARTMENT OF AGRICULTURE
NATIONAL PLANT MATERIALS CENTER
BELTSVILLE, MARYLAND

28 '72

1972 ANNUAL REPORT

[U.S.] *National Plant Materials Center*



UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
BELTSVILLE, MARYLAND

United States Department of Agriculture
Soil Conservation Service
National Plant Materials Center
Beltsville, Maryland

1972 ANNUAL REPORT

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United States Department of Agriculture
Soil Conservation Service
National Plant Materials Center
Beltsville, Maryland

PERSONNEL

H. W. Everett.....Manager
Gary V. Schultz.....Soil Conservationist
John A. Dickerson.....Soil Conservationist
John H. Kimmons.....Soil Conservationist
Richard C. Russell.....Biological Technician
Robert A. Hood.....Nursery Worker
John D. Clark.....Nursery Worker
Taffeta L. Chroniger.....Secretary-Typist

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United States Department of Agriculture
Soil Conservation Service
National Plant Materials Center
Beltsville, Maryland

INTRODUCTION AND 1972 ACTIVITIES

This report covers the major operations of the National Plant Materials Center for the calendar year 1972. The operations reported herein were directly applied to the functions of:

1. Seed and plant assembly from world-wide sources for the SCS plant materials program.
2. Initial increase of assembled material.
3. Exchange of conservation plant materials with other countries.
4. Verification of plant materials identities.

In addition, work was carried out pursuant to the co-operative agreement between the Maryland State Highway Administration and the SCS National Plant Materials Center. An Interim Report of activities and progress on the project was prepared in 1972 and is in press.

Assembly and distribution of plant materials occupied a large portion of time with 537 new accessions acquired and 1,086 accessions sent out. SCS Plant Materials Centers received 614 accessions, other agencies (including universities) received 110 accessions, and foreign countries were sent 362 accessions. Over 350 accessions were increased from initial observation rows in the field.

The SCS Plant Sciences Division and ARS Plant Science Research Division cooperatively released a new shore juniper variety from the National Plant Materials Center called 'Emerald Sea'. The accession was collected from the coastal sand dunes in northern Japan and has proven to be low growing and attractive in summer and winter weather. Trials to prove its usefulness for sand dune stabilization in the United States are under way even though it stabilizes the sand dunes in its native habitat.

Robert Hood and John Clark reported for duty in the spring as nursery workers.

H. W. Everett and G. V. Schultz attended classes at the University of Maryland in the Agronomy Department.

H. W. Everett visited the Georgia and Florida Plant Materials Centers to review the operations and obtain information on current plant materials needs.

G. V. Schultz was placed on education leave in August in order to complete his Master's Degree research.

H. W. Everett participated in the Midwest Allocation at Bismark, North Dakota in September and visited the Plant Materials Center there.

John H. Kimmons reported for duty as Soil Conservationist in December. He will participate in plant materials center operations and be responsible for much of the cooperative agreement study with the Maryland State Highway Administration.

CLIMATOLOGICAL SUMMARY*

The National Plant Materials Center has a humid, continental-type climate, primarily due to the typical west to east atmospheric flow and 43 inches average annual rainfall. Summer weather is dominated by large masses of warm, moist air spreading northward from the south and southwest. The winter weather is rapidly changed from day to day by alternating high and low pressure systems in the west - east flow.

Temperatures of 90°F or higher occur 40 days per year on the average and 32°F or lower occurs on 119 days per year. The average annual precipitation of 43 inches is evenly distributed in a typical year. Summer rainfall of significance is generally from thunderstorms or the occasional tropical storm or hurricane that affects the weather.

The growing season averages 162 days with 50 percent probability that it will begin April 29 and end on October 9.

*Extracted from summary by W. J. Moyer, NOAA Climatologist of data taken at the Bell Weather Station, Glenn Dale, Maryland.

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WEATHER DATA

1972

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National Plant Materials Center
Beltsville, Maryland

Temperature - °F

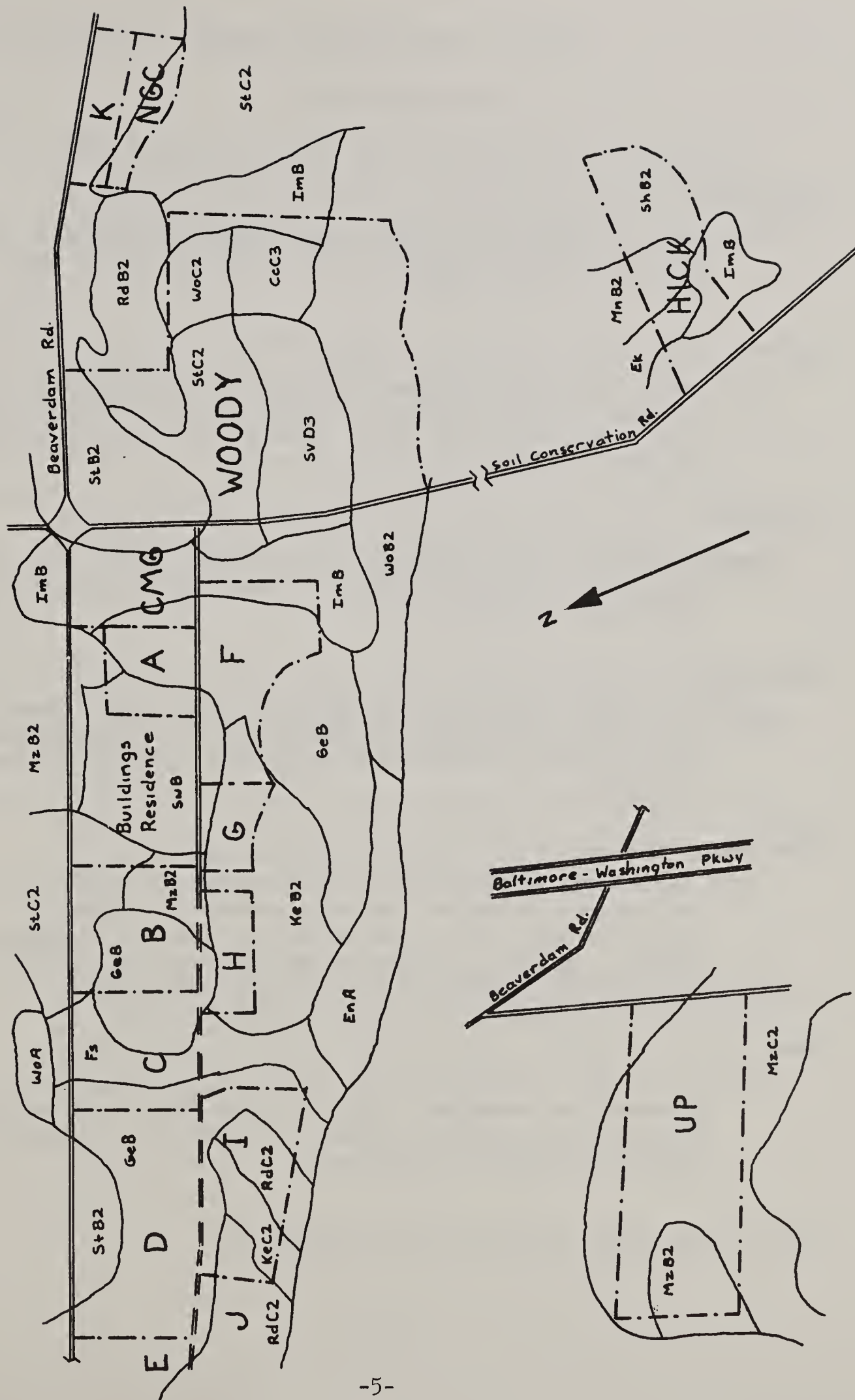
	Low	High	Mean Low	Mean High	Difference 1972 Mean Low From 12 Year Average	Difference 1972 Mean High From 12 Year Average	Total Precipi- tation	Average Total Precipi- tation
January	-1	66	25	44	+2.4	+12.6	2.85	2.82
February	11	73	23	42	-1.4	-4.0	5.72	2.62
March	17	77	31	52	+2.4	+0.9	2.77	3.72
April	25	85	38	63	+7.9	-3.0	4.10	3.19
May	34	84	51	73	+1.3	-1.1	5.74	3.97
June	37	87	57	77	-1.3	-5.0	10.29	4.09
July	53	96	65	84	+1.3	-3.5	3.58	4.50
August	50	92	61	84	-1.3	-0.9	1.49	4.86
September	44	90	56	78	+1.2	-1.3	1.10	3.32
October	26	75	39	63	-4.0	-5.1	2.87	3.04
November	19	72	32	53	0.0	-3.1	6.15	3.20
December	14	65	34	49	<u>+9.8</u>	<u>+4.6</u>	<u>7.58</u>	<u>3.25</u>
Yearly					+1.53	-0.7	54.24	42.58

The year of 1972 was a year of extremes in rainfall amounts. Tropical storm Agnes resulted in rainfall near the 100 year frequency level. The spring months were above average in rainfall, making field work slow. August and September were quite dry and irrigation of many of the fields was required.

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Data furnished by: Nutritional Management Investigations
Dairy Cattle Research Branch, ARS

Soils and Field Boundaries - National Plant Materials Center



National Plant Materials Center

Soils Descriptions*

Cristiana

Clay (CcC3) - well drained soils, clayey throughout; most of the surface soil lost through erosion. Capability unit IVe-3. Moderate to strong acidity.

Elkton

Silt loam (Ek) - poorly drained silt loam over clay or silty clay. Drainage is a major problem. Capability unit IIIw-9. Strong to extreme acidity; the water table near the surface much of the year. Suitable for crops if drained.

Elsinboro

Sandy loam (EnA) - sand dominant in the surface layer. Well suited to general crops and deep-rooted crops. Capability unit I-5. High moisture holding capacity.

Fallsington

Sandy loam (Fs) - poorly drained loams and sandy loams. Capability unit IIIw-6. Strongly to extremely acid with moderate moisture holding capacity and moderate fertility. Suitable for farm uses if drained.

Galestown - Evesboro

Loamy sands (GeB) - coarse, loose and droughty. Severely limited for farming; protection from wind erosion is necessary. Capability unit IVs-1. Low natural fertility and extreme acidity. Suitable for deep-rooted crops and for shallow-rooted plants if irrigation is supplied when needed.

Iuka

Sandy loam (ImB) - moderately well drained, some drainage aids necessary for cropping. Capability unit IIw-7. Moderate to high moisture - holding capability. Strongly to extremely acid. Suitable for general farm crops.

*Refer to preceeding soils and field boundary map.

Soils Description - 1971

Keyport

Fine sandy loam (DeB2, KeC2) - moderately well drained sandy, silty, and silty clay loams. Erosion rather than drainage is the prime consideration. Capability units IIe-36 and IIIe-36. Strongly acid, natural fertility medium to low. Well suited to some farm crops when managed.

Matapeake

Silt loam (MnB2) - well drained. Suitable for most crops including tobacco. Capability unit IIe-4. High moisture holding capacity and good natural fertility.

Muirkirk

Loamy sand (MzB2, MzC2) - erosion hazard from the thick sandy surface layer. Capability units IIs-5 and IIIe-5. Rapidly permeable, medium to strongly acid, moderate in fertility. Suited to deep-rooted crops only unless irrigated.

Rumford

Loam sand (RdB2, RdC2) - medium and coarse sand moderate to dominant in the surface layer. Low in moisture and plant nutrients, but high-quality crops can be produced if managed properly. Capability units IIs-4 and IIIe-33. Excessively drained, acid.

Sandy and clayey land (ScB, ScC) - suitable for undemanding farm crops on rotation with long-term pasture or woodland. Dominant sand in the surface layer. Capability units IIIe-41 and IVe-5. Medium to extreme acidity, fertility low to high.

Sassafras

Sandy loam (ShB2) - moisture holding capacity is good except for prolonged drought. Erosion is likely unless good farm practices are followed, suited to most crops. Capability unit IIe-5. Acid, productive under fertilization. Suitable for most crops.

Soils Description - 1971

Sunnyside

Fine sandy loam (StB2, StC2) - moderate risk of erosion, droughty only during long dry periods. Suited to most crops. Capability units IIe-5 and IIIe-5. Acid, require fertilizer for good crops.

Sandy clay loam (SvD3) - severely eroded if unprotected. Suitable for hay or pasturage only, or woodland. Capability units VIe-2. Well drained, strong to extreme acidity.

Loam (SuC2) - moderately eroded. Suited to general crops and medium quality tobacco. Capability unit IIIe-4. Deep, well drained, medium to strong acidity. Moderate to high natural fertility.

Urban land (SwB) - disturbed land with no capability unit assigned. Variable potential and productivity.

Woodstown

Sandy loam (WoB2, WoC2) - moderately well drained. Both erosion control and improved drainage are needed due to seasonally high water table. Capability units IIe-36 and IIIe-36. Moderately coarse textured and strongly acid. Natural fertility is medium to low. Suitable for some crops except where limited by slope.

NOTES AND COMMENTS

GRASSES

Agropyron cf. leptourum (Nevski) Grossh

PI-314208 from the Soviet Union was ill-suited to the Beltsville climate. It had very few, fine, erect stems and very few, soft leaves. At flowering in July, this bunchgrass was 86-40x18 cm. in size. Severe leafspot and heat killed the plants before seed was produced. Field D.

Agropyron pectiniforme Roem. & Schult.

The three U.S.S.R. accessions reported this year were grown in Field G.

PI	Habit	Stems	Leaves	Maturity		Vigor	Recovery	Notes
				Size(cm.)	Date			
325187	Per-bunch	A,F,E	F,M,C	50-50x35	8	F	E-M	Leafspot
326204	Per-bunch	M,F,E	F,S,C	70-50x30	7	F	E-A	Leafspot
326205	Per-bunch	M-A,F,E	F,S,C	65-40x30	8	G-F	E-A	

Agropyron tauri Boiss. & Bal.

PI-330689 from Iran was extremely effected by the summer heat. It had very poor vigor with few, fine, lax stems bearing very few, medium-textured leaves. The plants bloomed in June at a size of 70-30x8 cm. No seed was collected; the plants died prior to maturity. Field G.

Alopecurus geniculatus L.

A dense, solid sod was produced by PI-345949 in the second season. This Norwegion accession had early, abundant spring recovery. Moderately abundant, fine, erect stems and abundant, soft basal leaves were produced until heat damage began in August. At maturity in July a size of 28-10x55 cm. was noted. Ripening uniformity was fair to poor. By October the sod was dead - no fall recovery took place. Field G.

Alopecurus pratensis L.

PI-266006 from Poland had good vigor at Beltsville. Spring recovery was early and abundant, but leafspot reduced the vigor by June. This meadow foxtail had moderately abundant, fine, erect stems with medium numbers of soft to medium-textured leaves. Severe shattering reduced the seed crop at maturity in June. The mature size was 100-50x35 cm. because the rhizomes were limited by cultivation. Forage production was rated fair to good. Field G.

PI-348859 from Belgium had fair to poor vigor and forage production at Beltsville. The small bunches grew to 80-40x23 cm. by maturity in July. Medium numbers of fine, erect stems bore few, medium-textured leaves. Early but moderate spring recovery was noted. Field G.

GRASSES

Andropogon scoparius Michx.

Three little bluestems were reportable at Beltsville this year. All were typical bunchgrasses.

<u>PI</u>	<u>Origin</u>	<u>Stems</u>	<u>Leaves</u>	<u>Maturity</u>		<u>Vigor</u>	<u>Forage</u>	<u>Notes</u>
				<u>Size(cm.)</u>	<u>Date</u>			
213876	Rhode Is.	M-A,F,E	F-M,S,C	65-40x30	9	F	F-P	Field UP. Early. Light insect and rust damage.
216748	Texas	A,M,E	M,M,C	130-75x30	10	G	F-G	Field G. Excessive lodging.
216753	Texas	Not hardy - died shortly after planting.						

Arrhenatherum elatius (L.) Presl.

PI-345955 from Norway was a perennial bunchgrass with early, abundant spring recovery. Abundant, soft leaves were borne on few, erect, medium-textured stems. At maturity in July, the size was 85-60x45 cm. Shortly thereafter, however, severe rust greatly reduced vigor and forage quantity. Field G.

Axonopus micay Garc.-Barr.

PI-365630 from Colombia arrived as vegetative material at the NPMC. It was grown outside for one season, producing medium numbers of very coarse (and flattened), sub-erect stems bearing moderately abundant and textured leaves. A size of 60-35x80 cm. was attained by bloom in August. Poor uniformity of ripening and excessive shattering were noted, thus only a small quantity of seed was collected. A vigorous, stoloniferous, coarse accession. Not hardy at NPMC. Field G.

PI-358060 from Costa Rica also came in as stolon material. It was not as vigorous as the previous accession. Few, coarse (flattened), and prostrate stems were produced. The leaves were also few in number and harsh. At maturity in October a size of 50-30x150 cm. was noted. Severe seed shattering was noted. Not hardy at NPMC. Field G.

Bothriochloa glabra (Roxb.) A. Camus

<u>PI</u>	<u>Origin</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Maturity</u>		<u>Vigor</u>	<u>Forage</u>	<u>Notes</u>
					<u>Size(cm.)</u>	<u>Date</u>			
208915	S. Africa	Per-bunch	M,F,SE	A,M,C	73-58x85	8	G	F	Field UP. Hardy. Stemmy.
239164	Australia	Per-bunch	F,C,SE	M,M,C	80-60x67	11	G	F-P	Field K. Not hardy. No fill.

GRASSES

Bothriochloa glabra (Roxb.) A. Camus

PI	Origin	Habit	Stems	Leaves	Maturity		Vigor	Forage	Notes
					Size(cm.)	Date			
240833	Australia	Per-bunch	F,C,E	M,H,C	120-68x90	10	G	F	Field G. Not hardy. Poor forage.
241496	New Guinea	Per-bunch	F,C,E	M,S,C	135-62x70	11	G	G	Field Ic. Not hardy. Fair seed producer.

Bothriochloa grahamii (Haines) Bor

Native to New Guinea and India. Gregarious on old fields. PI-241498 from New Guinea had poor vigor at Beltsville. Very few stems and leaves were produced; the stems were fine and sub-erect with medium-textured leaves. The size at bloom in September was 55-30x60 cm. The plants failed to mature and winterkilled. Seed is available. Field A.

Bothriochloa intermedia (R.Br.) A. Camus

PI	Origin	Habit	Stems	Leaves	Maturity		Vigor	Forage	Notes
					Size(cm.)	Date			
213858	India	Bunch	F,C,E-SE	A,M,C	67x100	11	G	F	Field UP. Not hardy. Poor fill.
216701	Texas	Bunch	F,C,E	A,M,C	160-100x100	10	E	G	Field B ₃ . Not hardy. Best one.
239165	Australia	Bunch	None	M,S,C	100x92	Not	F-G	F	Field G. Not hardy.
239166	Australia	Bunch	A,C,SE	M,M,C	105-60x100	10	F	F	Cold Frame Not hardy.
348924	New Guinea	Bunch	None	A,M,B	85x95	Not	G	G	Field Hick. Not hardy. Did not produce seed heads.

Bothriochloa intermedia v. montana

'J' strain, BN-19085 from Oklahoma, was not vigorous. The stems were few, medium-textured and erect, bearing medium numbers of soft leaves. Maturity was noted in November at a size of 135-80x70 cm. Forage quantity was fair, but the plants were not hardy. The name has so far been verified only to species, and no available publications list an authority. Field UP.

GRASSES

Bothriochloa ischaemum (L.) Keng.

PI-176409 from Oklahoma produced poor cover at Beltsville. There were few stems and very few leaves on this bunchgrass. The fine-textured, sub-erect stems bore medium-textured leaves, while growing to 75-50x60 cm. by maturity in September. Vigor was rated fair and forage poor on the first year of growth. Winterkill, probably brought on by poor summer vigor, limited the observation period. Field A.

PI-245727 from Turkey was hardy at Beltsville, yet could not produce good cover. There were very many fine, sub-erect stems but medium to few soft, cauline leaves. At maturity in August the size was 90-40x62 cm. with good vigor. Field UP.

Bothriochloa ischaemum v. songarica Rupr. Celarier & Harlan

Three accessions were grown, two were hardy. This variety seems to be much leafier than Bothriochloa ischaemum. The leaves dry out and curl up in mid-summer reducing forage value.

PI	Origin	Habit	Stems	Leaves	Maturity		Vigor	Forage	Notes
					Size(cm.)	Date			
174042	Turkey	Per-bunch	M,M,E	A,H,C	72-40x50	8	G	F-P	Field B ₃ . Hardy.
213857	Formosa	Bunch	None	A,M,B+C	60x70		G	F	Field B ₃ . Not hardy.
218060	Pakistan	Per-bunch	F,F,E	M-A,S,C	75-40x55	8	G	F	Field UP. Hardy.

Brachypodium pinnatum (L.) Beauv.

PI-345964 from Norway was average for this species at Beltsville. The bunches were moderately abundant with soft, basal leaves on few, fine, erect stems. The mature size was 75-35x50 cm. in August. Early but sparse spring recovery was noted and the vigor was average the remainder of the year. Field G.

Briza minor L.

A native bunchgrass of the Mediterranean region. Often found now in temperate regions. Annual.

PI-378045 from France became chlorotic in June. A few, fine stems were produced bearing medium numbers of soft leaves with declining vigor. No heads were produced prior to death in October. The plants were essentially dormant from August on. Field G.

GRASSES

Bromus biebersteinii Roem. & Schult.

Two accessions from Bulgaria were grown and found to be very similar. Both were rhizomatous and grew to about 115-70x80 cm. They had abundant, erect and weeping stems. The medium-textured leaves were medium to abundant later in the season. Good vigor and good forage quantity were noted. In both cases, leafspot was light and maturity occurred in July. Field Hick.

PI-341222 had ergot in varying degrees, and was uniform with shorter leaves.

PI-341223 had moderate leafspot.

Bromus inermis Leyss.

<u>PI</u>	<u>Origin</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Maturity</u>		<u>Vigor</u>	<u>Forage</u>	<u>Notes</u>
					<u>Size(cm.)</u>	<u>Date</u>			
341226	Canada	Per-rhiz.	V-A,F,E	F,S,B+C	80-63x40	6	F-G	F	Field B ₃ . Columnar habit. Moderate leafspot. Resistant to <u>Pyronophora bromi</u>
341227	Canada	Per-rhiz.	A,M,E	M,M,C	120-60x50	7	F	F-G	Field G. Severe leafspot. Resistant to <u>Pyronophora bromi</u>
341228	Canada	Per-rhiz.	A,M,E	M,M,C	110-85x60	8	G	F	Field G. Moderate leafspot. Resistant to <u>Pythium graminicola</u>
345966	Norway	Per-rhiz.	A,M,E	A,S,C	120-65x80	7	G	G	Field G. No leafspot. Best accession.

GRASSES

Bromus willdenowii Kunth

PI-345967 from Madeira was grown at Beltsville. This prolific re-seeder had medium numbers of stems and leaves. The soft leaves were cauline on fine, erect and weeping stems. Though small, it was vigorous. Small size and sparse spring recovery limited the forage production of this uniform accession. Maturity occurred in July. Light leafspot was observed then also. Field G.

Bromus sp.

PI-378046 was obtained from Versailles, France as Bromus macrathrus. The origin was southern Argentina, so it presumably is adapted to a cool climate. This accession had only fair vigor at Beltsville, growing to 22-6x9 cm. at maturity in July. The stems were medium in number, fine and erect to sub-erect. Medium numbers of soft, basal and cauline leaves were produced. The leaf tips began to die back in early June and the plants were dead in August. Seed was collected. Field Ic.

Calamagrostis arundinacea (L.) Roth

PI-283206 was a stooling bunchgrass with good vigor but variable size. Medium numbers of fine, erect stems supported a few, harsh leaves. This Polish accession had a size of 135-70x40 cm. at maturity in July. Moderate leafspot and pale leaves were observed. Field G.

Catapodium patens (Brot.) Rothmaler & P. Silva

PI-378047 from Portugal acted as a cool season annual. This accession had fair to good vigor in the early spring, but declined in vigor through May and June. Maturity occurred in early July at a size of 50-20x8 cm., and was followed by death in August. The small bunches had medium numbers of fine, erect stems and few, soft, cauline leaves. A poor accession for Beltsville. Field Ic.

Catapodium rigidum (L.) C. E. Hubbard

PI-378048 from France was even smaller than the previous accession. At maturity in July the size was 12-6x12 cm. Apparently a winter annual, the bunches had few, fine, erect stems bearing a few, soft leaves. The plants were dead by mid-August. Field Ic.

Cenchrus ciliaris L.

Buffel grass is not hardy at Beltsville and PI-345976 from Madeira was no exception. It produced moderately abundant, fine, erect to sub-erect stems. The leaves were abundant, medium in texture and cauline. Maturity occurred in August at a size of 70-40x80 cm., but good vigor remained until the first frost in November. The seed heads had poor fill. Field G.

GRASSES

Deyeuxia avenoides (Hook.f.) J. Buch.

PI-378049 from New Zealand acted as an annual at Beltsville. The small bunchgrass produced abundant, very fine, erect stems. The leaves were medium in number, soft, basal and cauline. The plants matured in July at a size of 40-20x12 cm. with moderate lodging noted. Shortly afterward, the plants died with some seedlings coming up in the fall. Poor cover and forage quantity. Field K.

Digitaria scalarum (Schweins.) Chiov.

PI-376367 was a rhizomatous and stoloniferous warm, tender perennial. It survived only by bringing into the greenhouse. The seasons are too short here to produce mature seed. Abundant, medium-textured, sub-erect and prostrate stems were produced bearing soft, abundant leaves. The largest size attained was 47-32x70 cm. in August. Good vigor (in the warm months) and good to fair forage production were noted. Aggressive. Field Ic.

Elymus agropyroides Presl.

PI-378050 from Chile was not suited to the Beltsville summers, as it was undoubtedly from a mountain region. Poor vigor was noted from the small bunchgrass with only few stems and leaves produced. The medium-textured, erect stems and soft, basal and cauline leaves were badly burned by mid-July. The plant size was 40-30x20 cm. The plant was dead by seed collection in August. Field Ic.

Elymus antarcticus Hook.f.

PI-378051 from southern Chile was even less suited to Beltsville than the previous accession. Poor vigor and leafspot limited growth to 14x15 cm. with few stems and leaves. No seed heads were produced, and the plants were dead in August. Field D.

Elymus arenarius L.

<u>PI</u>	<u>Origin</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Maturity</u>		<u>Vigor</u>	<u>Spring</u>	<u>Notes</u>
					<u>Size(cm.)</u>	<u>Date</u>		<u>Recovery</u>	
345979	Norway	Per-rhiz.	F,C,E	M,H,B+C	85-35x10	7	G	E-M	Slowly filling in.
348865	Belgium	Per-rhiz.	V-F,M,E	M,H,B+C	87-50x45	7	E-G	E-A	Best accession at Beltsville.

GRASSES

Elymus patagonicus Speg.

PI-378052 from Chile was like Elymus antarcticus and Elymus agropyroides, in which all were unsuited to Beltsville summers. Fair to poor vigor and small size characterized the small bunchgrass with few stems and leaves. The stems were fine and erect, the leaves medium, basal and cauline. By maturity in August the size of 53-20x16 cm. was attained, but mortality occurred in October. Field UP.

Elymus sibiricus L.

<u>PI</u>	<u>Origin</u>	<u>H Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Maturity</u>		<u>Vigor</u>	<u>Spring</u>	<u>Notes</u>
					<u>Size(cm.)</u>	<u>Date</u>		<u>Recovery</u>	
325315	U.S.S.R.	Per-bunch	F,M,E	M,M,B+C	75-30x40	8	F	E-M	Moderate leafspot. Severe heat damage or humidity.
326266	U.S.S.R.	Per-bunch	M,M,E	A,S,B+C	75-35x40	8	F	E-A	Light leafspot. Summer die-back.

Elymus sp.

Severe heat damage limited the notes on PI-378053 from Versailles, France to one year. This grass was shortly rhizomatous, but poor vigor limited mature size to 90-30x40 cm. Few stems and leaves were produced. Stems were medium in texture and erect, the leaves were both basal and cauline. The plants were dead by October. Field G.

Eremochloa ophiuroides (Munro) Hack.

'Oklawn' BN-15989 was grown in the cold frame where it barely survived the winters. A warm, tender perennial from Oklahoma with stoloniferous habit. Complete cover was achieved in late summer, but only sparse recovery would follow the next spring. The abundant leaves were soft, cauline and well distributed. No seed was ever produced.

Festuca gigantea (L.) Vill.

PI-345981 from Norway was a perennial bunchgrass with poor adaptation to Beltsville. Very few, erect stems with medium texture were produced. The leaves were medium in texture and numbers, both basal and cauline. The plants never matured (only one head), but the largest size was 80-30x30 cm. in August. Leafspot was severe by the first week of July. Field G.

GRASSES

Festuca ovina L.

Beltsville is warm and humid for many of the cool season items such as sheep fescue.

PI-345982 did react well to the spring and fall weather, but summer vigor and forage production was poor. This Norwegian accession had abundant leaves and stems with fine, soft texture. The weeping stems and basal leaves grew to a size of 28-20x25 cm. by maturity in late June. Field B₃.

Festuca pratensis Huds.

PI-345983 was another cool-season perennial bunchgrass from Norway. The stems and leaves were moderately abundant and medium in texture. Maturity occurred in early July with the erect stems and basal to cauline leaves measuring 95-46x40 cm. Fair vigor and forage quantity were noted although moderate leafspot was present. Spring recovery was early but moderate. Field B₃.

Festuca rubra L.

'Jamestown' BN-19090 from Rhode Island grew fairly well at Beltsville, particularly in the spring with very abundant recovery. Summer vigor was only fair, however, nutrient limitations rather than climate was the most likely cause. Abundant, fine, erect (but lodging) stems and medium, soft, basal and cauline leaves were noted. Maturity occurred in late July at a size of 60-15x30 cm. Field Hick.

PI-345984 from Norway was vigorously rhizomatous at Beltsville. It maintained good vigor through the summer, producing a solid sod. Forage quantity was fair to good, for Festuca rubra. Abundant fine, erect stems and medium to abundant, soft leaves were produced. The leaves were basal and cauline. Maturity occurred in early July at a size of 72-45x40 cm. lodging of the stems was moderate. Early, abundant recovery was noted in the spring. Field G.

PI-346031 from Norway was originally accessioned as Seßleria argentea. The abundant leaves and stems were soft, fine and erect. The mature size in July was 60-34x45 cm. at which time the plants remained a lush green. By early October the plants were brown due to the heat. Up to that time, vigor was rated fair to good. Severe lodging was noted. Field G.

Ischaemum sp.

PI-348927 had weak seedling vigor, which did not improve in the greenhouse. After moving outside, vigor improved but no mature seed was produced. Apparently, the Beltsville growing season is too short for this New Guinea bunchgrass. The purplish leaves were abundant, medium-textured, and cauline on a few, coarse, erect stems. The largest size noted was 60-28x60 cm. The accession was left outside and winterkilled. Field K.

GRASSES

Juncus maritimus Lam.

PI-351149 was grown in and out of the greenhouse for two years and finally matured after moving out for the second summer. This species is very similar to some of the native marsh species such as Juncus roemerianus. The needle-like leaves are hard and sharp enough to easily puncture clothing and skin. This Israeli accession had abundant, basal leaves. When it finally did bloom, very few heads were put up on hard, erect stems. The plant size was 80x90 cm., with the leaves taller than stems by 15 cm. Though the Israelis' believe this to be a useful grass for water purification, perhaps the more hardy native species have greater conservation potential. This grass did survive in the field through the mild 1972-73 winter. Field G.

Koeleria candata v. algeriensis Domin.

PI-345744 from Spain had fair to poor vigor at Beltsville. This small, tight bunchgrass was hardy and grew abundant stems with fine, erect habit. The leaves were medium in numbers, soft, basal and cauline. The size was 60-10x30 cm. at maturity in early July. The seed fill was poor. Field G.

Melica cupanii Guss.

PI-330710 from Iran was a hardy bunchgrass with stemmy growth. Abundant fine, erect stems dominated the few, soft, cauline leaves. The mature size was 80-50x35 cm. in early July, but forage quantity was rated poor due to a lack of leaves. Generally a poor accession. Field G.

Panicum antidotale Retz.

PI-213272 from India was a warm, tender, perennial bunchgrass. The stems were few, coarse and erect, bearing few, medium-textured, well-distributed leaves. Maturity occurred in August at a size of 210-185x90 cm. Due to the declining vigor and sparse spring recovery the plants were removed. Field G.

PI-308603 was only slightly more hardy than the previous accession and smaller in size. Few stems and leaves were noted with coarse and medium texture respectively. The erect to sub-erect habit of this bunchgrass from Italy measured 160-150x80 cm. in August at maturity. Aphids inflicted moderate damage on the spindly plants. Worthless here. Field UP.

Panicum dichotomiflorum Michx.

BN-10997 from the mountain section of North Carolina was never very happy at Beltsville, and only grew to 75-50x40 cm. at maturity in August. Though it produced moderately abundant, fine, erect stems, the soft, cauline leaves were only few to moderate in number. Field UP.

GRASSES

Paspalum spp.

Four tropical and sub-tropical species were grown. All winterkilled the first year.

<u>PI</u> <u>and</u> <u>Species</u>	<u>Origin</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Maturity</u>		<u>Vigor</u>	<u>Notes</u>
					<u>Size(cm.)</u>	<u>Date</u>		
310091 dilatatum Poir.	Brazil	Bunch	M,M,SE	M,S,C	100-40x70	Not	G	No seed produced.
310134 nicorae Parodi	Brazil	Rhiz.	M,M,SE-P	M,S,C	60-30x70	11	G	Lodged.
348930 orbiculare G. Forst.	New Guinea	Stol.	F,F,P	M,S,C	10x100	Not	G	Purple, very prostrate.
348931 scrobiculatum L.	New Guinea	Stol.	M,C,SE	M,S,C	90-50x80	9	G	Open.

Pennisetum dichotomum (Forsk.) Delile

PI-346013 from the Canary Islands had abundant stems and leaves with harsh texture. The erect stems bore purple heads 24 cm. long. This bunchgrass had a size of 100-70x50 cm. at maturity in August. The vigor was fair to good and the plants were not hardy at Beltsville. Field Ic.

Pennisetum latifolium Spreng.

PI-331131 was a very interesting grass from Uruguay but of little value at Beltsville. It was very large (220-160x90 cm.) in the first year with very coarse, erect stems and harsh, leathery leaves. The stems and leaves were few in number, but had excellent vigor. A coarse accession, it was just barely hardy at Beltsville. Field G.

Pennisetum macrostachyum (Brongn.) Trin.

PI-354276 from New Guinea winterkilled at Beltsville. Apparently an ornamental with purple foliage and attractive heads. Its conservation value is limited by few stems and leaves. The coarse stems were erect, bearing the soft leaves to an overall size of 120-100x60 cm. at maturity in August. Seed production was very poor. Field Hick.

Pennisetum pedicellatum Trin.

PI-271146 from India is a leafy, tender, perennial, forage and hay grass. It grew well at Beltsville with good forage production and vigor. Though stoloniferous, it had few, fine, erect stems. The abundant leaves were medium in texture, basal and cauline. Maturity occurred in November at a size of 120-120x90 cm. with most of the growth during the warm months. Should be examined further. Field K.

GRASSES

Phalaris aquatica L.

PI-289670 from Spain was a perennial rhizomatous grass with little value here. The leaves were few, soft and cauline on moderately abundant, coarse, erect stems. The mature size in July was 120-80x60 cm. Fair vigor, poor forage and medium, sparse spring recovery summarize the performance at Beltsville. Field G.

Phalaris canariensis L.

PI-378054 was an annual bunchgrass from France. It had poor vigor in the field, growing to a size of 70-48x22 cm. The very few stems were fine and erect with a few, soft, cauline leaves. Maturity was in mid-July and the plants were dead by mid-August. Field G.

Phleum pratense L.

Two accessions were grown at Beltsville, PI-346016 from Norway and PI-348873 from Belgium. They were very similar in performance having abundant, medium-textured, erect stems bearing medium numbers of soft leaves. PI-346016 was 70-40x50 cm. at maturity in July, while PI-348873 was 100-45x50 cm. Both accessions had early, moderate spring recovery, leafspot and severe heat damage. PI-346016 had moderate lodging, while the other accession had none. Field G.

Poa angustifolia L.

PI-346017 from Norway was a rhizomatous perennial. In its second year there were moderately abundant, fine, erect stems. The leaves were soft, medium in number, both basal and cauline. Mature size in July was 80-25x30 cm. with fair but variable vigor noted. Spring recovery was early and abundant. Should be more leafy. Field G.

Poa compressa L.

PI-346018 from Norway had fair to poor vigor in the Beltsville heat. Abundant, fine, erect stems were produced, but there were only a few, soft, basal and cauline leaves. Maturity was in August at a size of 40-40x35 cm. Early, abundant spring growth followed by summer dormancy describes this accession. Field G.

Polypogon monspeliensis (L.) Desf.

PI-206883 from Turkey was a small compact plant. Though appearing to have good vigor, it died in August of the first year. Abundant, sub-erect medium-textured stems and medium numbers of soft, basal and cauline leaves were reported. Size at maturity in July was 18-8x14 cm. No apparent disease was present, and rhizomes, if produced, were very small. Field D.

Polytoca macrophylla Benth.

PI-348932 from New Guinea was a solitary perennial with few stems and leaves. This accession had poor vigor and forage was very poor due to the harsh leaves and stems. The largest size was 90x20 cm. but the plants did not mature. Leafspot was a moderate problem. Field G and Greenhouse.

GRASSES

Rottboellia exaltata L. f.

PI-348933 from New Guinea was a vigorous, tender bunchgrass. It grew well during the hot months and matured from July to October. The Tripsacum - like seed heads shattered while the seed was still green. Abundant, coarse, erect stems and soft, cauline leaves were produced to a size of 150-140x70 cm., so forage production was rated good. Field B₃.

Schizachyrium scoparium (Michx.) Nash

PI-213876 was received from Rhode Island under the name Andropogon scoparius. Though very similar to little bluestem it was smaller and bloomed earlier than they usually do at Beltsville. The stems were moderately abundant, fine and erect bearing few, soft leaves. A mature size of 65-40x30 cm. was observed in mid-August. In general a stemmy, perennial, warm-season bunchgrass that was susceptible to both leafspot and a rust. Field UP.

Setaria italica (L.) Beauv.

Two accessions of Foxtail millet were grown at the NPMC. Both were from Hungary and performed similarly.

PI-290458 had few, fine, erect stems and few, soft, cauline leaves. Size at flowering in June was 35-25x5 cm., but the heat burned up the plants prior to maturity. Field Ic.

PI-290461 had similar leaves and stems but was slightly larger at 50-30x15 cm. in June. Severe leafspot was noted, but the plants did mature in July. Field G.

Setaria palmiflora Stapf.

PI-354405 was an interesting ornamental grass from New Guinea. Very thick (2 cm.) main stems were lined with opposite arranged plantlets complete with roots. Where the sub-erect stem was close enough to the ground the plantlets rooted down. The leaves were wide and soft. The plants did mature at 50-20x40 cm. in July and some seed was collected. At Beltsville the plants were not dense enough (or hardy) to consider for conservation use here. Field Hick.

Setaria rariflora F. Presl.

PI-196204 was a warm, tender, perennial from Venezuela. It grew with good vigor through the warm months, but was not a good cover until August. Abundant, fine, sub-erect stems and medium numbers of medium-textured, cauline stems were produced. Two separate crops of seed were produced in September and November, however, the size remained at 65-40x35 cm. from August on. Field Ic.

GRASSES

Setaria splendida Stapf.

PI-316469 from Australia was a warm tender perennial bunchgrass. It had excellent vigor through the summer months, but never produced large numbers of leaves. The erect stems were medium in number and thickness, bearing medium numbers of medium-textured leaves. Maturity was in August at a size of 170-130x60 cm., yet the forage production was only fair. Field Ic.

Setaria verticiliata (L.) Beauv.

PI-346033 from Madeira via Norway was a good accession but not hardy at Beltsville. It was stoloniferous and produced a dense leafy mat. The abundant stems were fine and erect to sub-erect. Abundant, medium-textured, cauline leaves were noted. The mature size was 40-40x60 cm. in July. Good seed was produced from mid-June to mid-August. Excellent seed production. Field Ic.

Setaria sp.

BN-18266 was highly variable and not hardy at Beltsville. This Korean bunchgrass averaged medium numbers of both stems and leaves with a medium texture. The erect to sub-erect stems produced heads in early June, but the seed did not ripen until mid-September. Seed head shattering reduced the crop, but 156 grams were collected from two rod rows. Part of the variability may be due to the silting-over of the crown, which occurred on this accession. Field B₃.

Sorghum vulgare Pere

<u>BN</u>	<u>Stems</u>	<u>Leaves</u>	<u>Maturity</u>		<u>Vigor</u>	<u>Injury</u>	<u>Field</u>	<u>Notes</u>
			<u>Size(cm.)</u>	<u>Date</u>				
12404	F,VC,E	F,M,C	150x50	8	G	Aphids	G	Birds fought for the seed. Only partial protection from rain impact.
12405	F,VC,E	F,H,C	140-90x50	8	G	Aphids	G	Birds fought for the seed. Only partial protection from rain impact.
12406 'Titan'	F,C,E	F,H,C	160x50	8	G	None		Birds fought for the seed. Only partial protection from rain impact.

GRASSES

Sporobolus australasicus Domin

PI-257803 from tropical Australia was a warm, tender perennial with no conservation value at Beltsville. Only one plant successfully germinated from the seed pot, and it had fair vigor through the summer. Few, medium-textured, sub-erect to prostrate stems were produced bearing medium numbers of soft leaves. The mature size in August was 20-10x30 cm. Field Ic.

Stipa cernua Stebbins et Love

PI-378055 from France was received as a few seed. Only two germinated, and they produced spindly plants with poor vigor. The few, erect stems with cauline leaves were fine and soft in texture until maturity in early July. Shortly thereafter, the plants died. Field Ic.

Stipa tenuissima Trin.

PI-378056 from France was hardy, but only fair vigor. Small tight bunches measured 50-40x12 cm. at maturity in July. Few to medium, fine, erect stems were produced. The leaves were medium in number, soft and basal. Not much potential here. Field Ic.

Tripsacum dactyloides L.

BN-17961 from Texas was planted in a nine-row production block at the NPMC. It is a vigorous spreader through thick rhizomes and a good seed producer on few stems. In six years at Beltsville, it became prone to rust and ergot though abundant, medium-textured, cauline leaves were always present. Mature size averaged 150-100x150 cm. during August. Could be a weed in some areas. Accession destroyed at the NPMC. Field G.

Dr. Oakes' South African Collection (Greenhouse Culture)

<u>Species</u>	<u>PI</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Mature Size(cm.)</u>	<u>Months to Flowering</u>	<u>Vigor</u>	<u>Notes</u>
<i>Aeroceras</i>								
<i>macrum</i>	364374	Per-rhiz. +Stol.	MA,M,E-P	MA,S,C	55	2	G	Fair. Poor forage.
<i>macrum</i>	364375	Per-stol.	M,M,SE-P	M,S,C	30x40	5	M	
<i>macrum</i>	364376	Per-rhiz. +Stol.	VA,M,E-P	A,S,C	45	2	E	High N ₂ requirement.
<i>Axonopus</i>								
<i>compressus</i>	365101	Per-stol.	M,F,SE-P	MA,S,B+C	30-20x20	2	G	Poor forage.
<i>Bothriochloa</i>								
<i>glabra</i>	364394	Stol.	F,M,E	A,M,B+C	65-35x25	5	M	
<i>insculpta</i>	364396	Per-stol.	F,M,E-P	F,M,C	90-35x90	4	M	Spindly.
<i>insculpta</i>	364397	Per-St.bunch	A,F,SE	F,S,C	20x10	DNM	F	
<i>Brachiaria</i>								
<i>arrecta</i>	364399	Per-stol.	A,C,SE-P	A,M,C		DNM	G	Good. Fair forage.
<i>brizantha</i>	364400	Per-bunch	M,F,E-P	M,S,C		DNM	G	
<i>brizantha</i>	364402	Per.						
<i>brizantha</i>	364403	Per-stol.	F,M,SE	F,S,C	40x40	DNM	F	
<i>brizantha</i>	364405	Per-rhiz.	M,M,E-SE	F,S,C	50x30	DNM	G	
<i>dictyoneura</i>	364407	Per-stol.	M,M,E-P	M,S,C	23x15	DNM	F	
<i>dictyoneura</i>	364408	Per-stol.	A,M,SE-P	A,S,B+C		DNM	G	Good forage quantity, rapid cut recovery.
<i>humidicola</i>	364409	Per-stol.	M,F,SE-P	M,S,C	20x50	DNM	F	
<i>humidicola</i>	365104	Per-stol.	M,M,SE-P	A,M,B+C		DNM	G	Fair forage production.
<i>nigropedata</i>	364411	Per-stol.	M,F,E	M,S,C	80-50x40	2	G	Fair forage production.
<i>Cynodon</i>								
<i>dactylon</i>	364484	Per-rhiz. +Stol.	A,F,E	A,S,C	86	DNM	E	Pasture-type.
<i>dactylon</i>	364485	Per-stol.	M,F,E	M,S,C	52	DNM	G	
<i>dactylon</i>	364486	Per-stol.	MA,F,SE-P	MA,S,C	25	DNM	G	
<i>dactylon</i>	364487	Per-rhiz. +Stol.	MA,F,SE	M,S,C	25	DNM	F	
<i>dactylon</i>	364488	Per-stol.	A,VF,SE-P	MA,S,C	25	DNM	G	Weedy.
<i>dactylon</i>	364489	Per-stol.	A,F,E-P	MA,S,C	42	DNM	G	Weedy.
<i>dactylon</i>	364490	Per-stol.	A,F,E-P	F,S,C	40	DNM	G	Weedy.
<i>dactylon</i>	365499	Per-rhiz. +Stol.	M,M,SE-P	F,S,C		DNM	F	Open.
<i>dactylon</i>	364491	Per-stol.	F,F,E-P	F,S,C	25x100	DNM	G	Open.
<i>plectostachyus</i>	364492	Per-rhiz. +Stol.	M,F,E-P	M,S,C	60x90	DNM	G	Open.
<i>plectostachyus</i>	364493	Per-stol.	A,F,E-P	A,S,C	50x40	DNM	G	Open.
<i>plectostachyus</i>	364494	Per-rhiz. +Stol.	M,F,E-P	M,S,C	30x50	DNM	G	Open.
<i>plectostachyus</i>	364495	Per-stol.	F,F,E	F,S,C	35x180	DNM	G	

Dr. Oakes' South African Collection

<u>Species</u>	<u>PI</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Mature Size (cm.)</u>	<u>Months to Flowering</u>	<u>Vigor</u>	<u>Notes</u>
Cynodon								
plectostachyus	364496	Per-stol.	A,M,E-P	M,S,C	65x60	DNM	G	
plectostachyus	364497	Per-rhiz.+Stol.	M,F,E-P	M,S,C	35x130	DNM	G	
plectostachyus	364498	Per-stol.	M,M,E+SE	M,S,C	57x90	DNM	G	
plectostachyus	364499	Per-rhiz.+Stol.	F,F,P	M,S,B+C	7x70	DNM		Not Cynodon, re-ident. pending.
plectostachyus	364500	Per-rhiz.+Stol.	A,M,E-P	A,S,C	50x50	DNM	G	
plectostachyus	364501	Per	A,F,E-SE	A,S,C	40x56	DNM	G	
plectostachyus	370123	Per-stol.	M,M,E-P	M,S,C		DNM	G	Very open.
plectostachyus	370124	Per-stol.	F,C,SE-P	F,S,C		DNM	G	Very open.
Digitaria								
chevalieri	365500	Per-stol.	F,M,E	MA,S,C	35x20	DNM		
didactyla	364519	Per-stol.	M,F,E	MA,S,C	25	DNM		Possibly a Cynodon.
eriantha	364520	Per-stol.	M,F,P	F,S,C		DNM	F	Poor forage.
friesii	364357	Per-stol.	F,F,E	M,S,C	60-20x50	2	F-P	Diseased-destroyed.
longifolia	365111	Per-stol.	F,F,E	F,H,C	30x80	DNM	G	
longifolia	364523	Per-stol.	F,F,P	A,S,C	30-10x120	2	G	Very stoloniferous, medium to good cover.
milaniana								
milaniana	364529	Per-stol.	M,M,SE-P	M,S,C		DNM	F	Open.
milaniana	364530	Per-rhiz.+Stol.	M,M,SE	M,S,C	160-35x30	1		
milaniana	364533	Per-stol.	F-M,E-SE	M,S,B+C	120-35x30	5	F	
milaniana	364534	Per-stol.	A,M,SE-P	M,S,C	50-35x200	5	F	
milaniana	364535	Per-rhiz.	M,M,E	M,M,C	120-49x35	1		
milaniana	364537	Per-stol.		M,S,B+C	27x23	DNM	F	
milaniana	364540	Per-stol.	F,M,E	M,S,B+C	130-25x35	5		Very pubescent at nodes.
milaniana	364542	Per-stol.	A,F,P	F,S,C	25x130	DNM		
milaniana	364543	Per-stol.	M,F,SE-P	M,S,C		DNM	F	Open.
milaniana	364544	Per-rhiz.+Stol.	F,M,E	F,M,C	50x37	DNM	G	
milaniana	364546	Per-rhiz.+Stol.	A,F,SE	M,S,C		DNM	G	Open.
milaniana	364547	Per-stol.	M,F,SE-P	M,S,C		DNM	F	Open.
milaniana	364548	Per-stol.	M,F,SE-P	M,S,C		DNM	F	Mixed accession.
milaniana	364549	Per-rhiz.	F,F,SE	F,S,C	70-30x22	2	F	
milaniana	364550	Per-stol.	F,F,E-SE	F,M,C	80-27x40	2		
milaniana	364553	Per-rhiz.	A,F,E	A,S,C		DNM	G	Dense and short.
milaniana	364554	Per-stol.	M,M,E-SE	F,S,C	40x60	DNM	G	
milaniana	364556	Per-stol.	M,M,SE-P	M,S,C		DNM	F	Poor cover.
milaniana	364557	Per-stol.	A,F,SE-P	M,S,C		DNM	G	Good cover for Digitaria.
milaniana	364558	Per-stol.	M,F,SE-P	M,S,C		DNM	G	Fair cover.
milaniana	364579	Per-stol.	M,F,E+P	F,S,C		DNM	F	Open.

Dr. Oakes' South African Collection

<u>Species</u>	<u>PI</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Mature Size(cm.)</u>	<u>Months to Flowering</u>	<u>Vigor</u>	<u>Notes</u>
<i>Digitaria</i>								
<i>natalensis</i>	364559	Per-stol.	F,F,E	M,S,C	35-25x210	2	F	
<i>natalensis</i>	364562	Per-stol.		F,S,C	18x65	DNM		
<i>natalensis</i>	364563	Per-stol.	F,F,SE-P	M,S,C	35-20x70	5	F-P	Very pubescent at nodes.
<i>natalensis</i> ssp.								
<i>stentiana</i>	364566	Per-stol.		F,S,C	30x50	DNM		
<i>natalensis</i> ssp.								
<i>stentiana</i>	364567	Per-stol.	F,M,SE	F,M,C	50-25x26	4	F	
<i>natalensis</i> ssp.								
<i>stentiana</i>	364569	Per-stol.	M,C,P	A,S,C	12	DNM	E	Very dense, short stems flattened.
<i>pentzii</i>	364358	Per-bunch	F,F,E-SE	A,S,C	65-35x80	2		
<i>pentzii</i>	364571	Per-rhiz.+Stol.		F,S,C	30x70	DNM	G	Weedy.
<i>pentzii</i>	364572	Per-stol.	M,M,SE	M,S,C		DNM	G	Open.
<i>pentzii</i>	364573	Per-stol.	M,M,SE-P	M,S,C		DNM	G	Open.
<i>pentzii</i>	364574	Per-stol.	M,M,SE	A,S,C		DNM	G	Good cover. Dense.
<i>pentzii</i>	364576	Per-stol.	F,F,SE-P	F,M,C	40x100	DNM	G	
<i>pentzii</i>	364578	Per-stol.	F,F,E	M,S,C	48-34x76	2		
<i>pentzii</i>	364579	Per-stol.	M,M,E	F,S,C		DNM	F	Two types.
<i>pentzii</i>	364580	Per-stol.	M,M,P	M,S,C		DNM	G	
<i>pentzii</i>	364581	Per-rhiz.+Stol.	F,M,SE	A,S,C	80-40x20	1		
<i>pentzii</i>	364582	Per-stol.		F,S,C	30x85	DNM	G	Weedy.
<i>pentzii</i>	364584	Per-stol.	F,C,E	F,M,B+C	100-40x33	3	F	
<i>pentzii</i>	364585	Per-stol.	F,M,E	M,M,C	98-40x45	4	F	Mixed types.
<i>pentzii</i>	364587	Per-stol.	M,M,SE	F,S,C		DNM	F	Open.
<i>pentzii</i>	364588	Per-stol.	M,C,SE-P	M,S,C		DNM	F	Open.
<i>pentzii</i>	364589	Per-stol.	F,F,E	F,S,C	60-30x60	2		Weedy. Pubescent leaves and stems.
<i>pentzii</i>	364590	Per-stol.	F,M,SE	F,S,C	50-36x45	4	G	
<i>pentzii</i>	364592	Per-stol.	M,M,SE	F,S,C		DNM	F-P	Open.
<i>pentzii</i>	364593	Per-stol.	F,F,E	M,S,C	80-25x30	2		
<i>pentzii</i>	364594	Per-stol.	A,M,P	M,S,C		DNM	G	Open.
<i>pentzii</i>	364595	Per-stol.	A,M,E	A,S,C	40x120	DNM	G	
<i>pentzii</i>	364596	Per-stol.	M,M,SE-P	M,S,C		DNM	G	Open.
<i>pentzii</i>	364597	Per-stol.	F,M,SE-P	A,S,C	55-45x80	2		
<i>pentzii</i>	364598	Per-stol.		M,S,C	25x15	DNM		
<i>pentzii</i>	364602	Per-stol.	F,C,E	F,H,B+C	120-34x56	5	F	Long pubescent leaves and stems.
<i>pentzii</i>	364603	Per-stol.	F,F,E-P	A,S,C	50-28x150	2		
<i>pentzii</i>	364604	Per-stol.	F,M,P	VF,S,C		DNM	P	
<i>pentzii</i>	364605	Per	F,F,E	M,S,C	80-40x80	2		

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Species	PI	Habit	Stems	Leaves	Mature Size(cm.)	Months to Flowering	Vigor	Notes
<i>Digitaria</i>								
pentzii	364606	Per-stol.		F, S, C	30x45	DNM	G	Aphid damage.
pentzii	364608	Per-stol.	M, M, P	M, S, C		DNM	G	Open.
pentzii	364610	Per-stol.	F, M, SE	M, S, C	33x60	DNM	G	
pentzii	365112	Per-stol.	F, M, E	F, S, C	30x25	DNM	G	
pentzii	365115	Per-stol.		F, S, C	48x28	DNM	G	Open. Weedy.
pentzii	365501	Per-stol.	M, F, SE-P	M, S, C		DNM	F	Small
pentzii	365503	Per-bunch	F, M, E	A, S, C	30x26	DNM		
pentzii	365504	Per-stol.	F, F, E	F, S, C	50-30x100	2		
pentzii v. stolonifera	364618	Per-stol.		M, S, C	25x70	DNM		
pentzii v. stolonifera	364619	Per-stol.	M, F, E	F, S, C	26x200	DNM	G	Very stoloniferous, spreader.
pentzii v. stolonifera	364620	Per-stol.	F, M, E	M, H, B+C	110-35x42	3	G	Stems very pubescent
pentzii v. stolonifera	364621	Per-rhiz.+Stol.	F, F, E	F, S, C	50-27x25	1		
pentzii v. stolonifera	364625	Per-stol.	F, M, SE-P	M, S, B+C	20x90	1		
pentzii v. stolonifera	364626	Per-stol.	F, F, E-SE	M, S, C	46-26x28	1	G	
pentzii v. stolonifera	366023	Per-stol.	M, M, E+P	M, S, C		5.	G	
polevarsii	364629	Per-stol.		M, S, C	35x25	DNM		
polevarsii	364630	Per-bunch	F, M, E	F, S, C	38-38x15	3		Severe aphid attack.
polevarsii	365506	Per-stol.		M, S, C	30x200	DNM		
smutzii	364637	Per-stol.	M, M, E	M, S, C	80-22x70	2		
smutzii	364641	Per-rhiz.	F, F, E	M, S, C	96-40x40	2		
smutzii	364642	Per-stol.	F, F, E	M, S, C	45x100	2		
smutzii	364647	Per-stol.	F, F, SE	M, S, C	70-35x35	1	G	Fair forage.
smutzii	364653	Per-stol.	F, F, E	A, S, C	35x28x120	2		
smutzii	364666	Per-stol.	F, F, E	A, S, C	67-37x60	2		
smutzii	364668	Per-rhiz.+Stol.	M, M, SE	M, S, C		DNM	G	
valida	364672	Per-rhiz.	F, F, E	F, S, C	20	DNM	F	
valida	364673	Per-stol.	F, M, E	A, S, C	36-33x80	2		
valida	364674	Per-stol.	M, F, P	M, M, C	80-40x22	5	G	Purple stems with glaucous surface.
valida	364675	Per-rhiz.	M, M, E	M, S, C	100-55x28	1	G	Poor forage quantity.

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<u>Species</u>	<u>PI</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Mature Size (cm.)</u>	<u>Months to Flowering</u>	<u>Vigor</u>	<u>Notes</u>
Digitaria								
valida	364676	Per-stol.	F, M, E-SE	A, S, B+C	55x20	5		Stems very pubescent.
valida	364677	Per-stol.	M, M, SE-P	M, S, C		DNM	G	Very weedy.
valida	364678	Per-stol.	A, F, SE-P	M, S, C	20x50	3	G	Pubescent stems.
valida	364679	Per-stol.	A, F, E	M, S, C				
valida	364680	Per-stol.	M, M, SE-P	M, S, C	55-33x65	2		
valida	364681	Per-stol.	M, M, P	M, S, C		DNM	G	Younger leaves glaucous.
valida	364682	Per-stol.	F, F, E	M, S, C	50-35x50	2		
valida	364684	Per-rhiz.	F, M, E	A, S, C	35-25x55	2		
valida	364685	Per-stol.	F, M, E	M, S, B+C	120-60x25	5		
valida	364688	Per-stol.	F, F, E	M, S, C	110-70x40	2		
valida	364689	Per-rhiz.+Stol.	F, F, E	F, S, C	40x40	DNM		
valida	364690	Per-stol.	M, M, SE-P	F, S, C		DNM	F-P	Very open.
valida	364691	Per-stol.	VF, M, E-SE	A, S, C	35x30	1		
valida	364692	Per-stol.	M, C, P	M, S, C		DNM	F	Leaves brown and curled.
valida	364693	Per-bunch		M, S, B	40x30	DNM	G	Good forage quantity.
valida	364694	Per-stol.	F, C, SE	A, M, B+C	120-60x60	3		Good forage quantity.
								Long pubescence on stems.
valida	364696	Per-stol.	F, C, E	F, M, C	100-35x37	2	F	
valida	364697	Per-stol.		MA, S, C	41x25	DNM		
valida	364698	Per-stol.	M, M, E-SE	M, S, C		DNM	G	Leaves very broad. Good color.
valida	364699	Per-bunch	F, M, E-SE	M, S, B+C	50-30x20	2		
valida	364700	Per-stol.	F, M, P	M, S, B+C	30x20	DNM	G	
valida	364701	Per-stol.		F, S, B+C	30x20	DNM	F	Very prostrate. Good leaf color.
valida	364702	Per-stol.	M, M, E-SE	M, S, B+C	160-40x30	1	G	
valida	364703	Per-stol.		M, S, C	36x130	DNM		
valida	364704	Per-stol.		F, M, B	22x15	DNM	F	
valida	364706	Per-stol.	M, M, SE-P	M, S, C	15	DNM	F-P	Small, brownish leaves.
valida	364707	Per-stol.	F, F, P	M, M, C	32x40	DNM	G	
valida	364708	Per-stol.	A, F, SE-P	M, M, B+C	140-40x140	2		
valida	364709	Per-stol.		A, M, C	34x26	DNM	G	
valida	364710	Per-stol.	F, M, SE	F, S, C		DNM	P	Open, leaves browning.
valida	364711	Per-stol.		M, S, C	25x60	DNM	G	Good forage production.
valida	364712	Per-stol.	M, M, SE-P	A, S, B+C	50-23x30	3	G	Fair forage quantity.
valida	364713	Per-stol.	F, F, E	M, S, C	70-33x60	2		
valida	364714	Per-stol.		F, S, B	30x15	DNM	G-F	
valida	364715	Per-bunch	M, M, E	F, M, B+C	120-43x30	4	G	Fair forage quantity.
valida	364716	Per-stol.		F, S, B	26x22	DNM	G	Fair forage quantity.

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<u>Species</u>	<u>PI</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Mature Size(cm.)</u>	<u>Months to Flowering</u>	<u>Vigor</u>	<u>Notes</u>
<i>Digitaria</i>								
valida	364718	Per-stol.		F, S, C	30	DNM	G	Fair forage quantity.
valida	364720	Per-stol.	F, C, E	F, H, C	40x25	DNM	P	Poor forage quantity. Aphid damage.
valida	364724	Per-bunch	F, C, E	M, S, C	40x60	DNM	G	Good forage quantity.
valida	364725	Per-stol.	F, C, SE	F, H, C	45x30	1	G	
valida	364726	Per-stol.	F, M, E-SE	M, S, B+C	90-38x20	4	G	Fair forage quantity.
valida	364727	Per-stol.	M, M, SE	M, S, C		DNM	G	Poor forage quantity. Open.
valida	364728	Per-stol.	F, F, E	F, S, C	70-33x60	2		
valida	364729	Per-stol.	M, M, SE	M, S, C		DNM	G	Open. Poor forage.
valida	364731	Per-stol.		M, S, C	25x110	DNM	G	Fair forage quantity.
valida	364732	Per-rhiz.	A, M, SE	A, S, C	15	DNM	G	Fair forage quantity. Dense short cover.
valida	364733	Per-stol.		A, S, C	25x80	DNM		Severe aphid damage.
valida	364734	Per-stol.		A, M, C	35x30	DNM		
valida	364735	Per-stol.	F, F, E	M, S, C	40x25	DNM		
valida	364738	Per-stol.		A, S, C	35x70	DNM		
valida	364742	Per-stol.		M, S, C	30x20	DNM		
valida	364745	Per-stol.	F, M, P	F, S, C		DNM	F-P	Worthless. Open in Greenhouse.
valida	364750	Per-bunch	F, F, E	A, S, C	135x20	DNM		
valida	364757	Per-stol.	F, M, SE-P	M, S, C		DNM	G	Open.
valida	364759	Per-stol.	F, M, SE-P	M, S, C	30x70	DNM	G	Poor forage production.
valida	364760	Per-stol.	F, C, SE-P	M, M, C	50x40	5	G	Good forage production.
valida	364761	Per-stol.		F, S, C	35x180	DNM		
valida	365507	Per-stol.	F, F, E	M, S, C	80-30x50	2	G	
valida	370125	Per-stol.	F, C, SE	M, S, C		DNM	F	Disease light.
sp.	364762	Per-stol.	F, F, E	M, M, C	40-33x250	2	G	Open.
sp.	364769	Per-stol.	F, F, E	M, S, C	40-20x70	2	G	
sp.	364771	Per-stol.	F, F, E	M, M, C	67-25x25	2	G	
sp.	364778	Per-stol.		M, S, C	30x10	DNM	F	Fair forage quantity.
<i>Echinochloa</i>								
holubii	364785	Per-stol.	M, M, SE-P	VF, M, C		DNM	G	Poor forage quantity. Stemmy. Open
pyramidalis	364798	Per-stol.	F, C, E	F, M, C	85x110	DNM	G	Poor forage quantity.
pyramidalis	365509	Per-stol.	A, C, SE-P	M, S, C	25x80	DNM	E	Good forage quantity. Good cover.
<i>Eriochloa</i>								
borumensis	364837	Per-stol.	F, C, SE-P	F, S, C	120-70x340	2	F	
borumensis	364839	Per-stol.	F, C, SE	F, S, C	80-20x200	2	G	Forage quantity poor.
borumensis	364840	Per-stol.	F, M, E+P	F, S, C	130-100x30	3	F	

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<u>Species</u>	<u>PI</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Mature Size(cm.)</u>	<u>Months to Flowering</u>	<u>Vigor</u>	<u>Notes</u>
Hemarthria altissima	364344	Per-stol.	F,M,P	M,M,B		DNM	F	Not spreading like others. Rust-destroyed.
altissima	364861	Per-stol.	F,M,E	A,M,B+C	35	DNM	G	Good forage production, not a Hemarthria.
altissima	364862	Per-stol.	F,M,P	A,S,C		DNM	G	Few stolons. Rust-destroyed.
altissima	364863	Per-stol.	M,M,P	MA,M,C	30x50	DNM	G	Controlled growth, fine-leaved. Rust-destroyed.
altissima	364864	Per-stol.	M,M,P	A,S,C		DNM	G	Good forage production. Rust-destroyed.
altissima	364865	Per-stol.	M,C,SE-P	A,S,C	25x75	DNM	E	Good forage production, rapid recovery. Rust-destroyed.
altissima	364866	Per-stol.	M,M,P	M,S,C		DNM	G	Rust-destroyed.
altissima	364867	Per-stol.	M,C,SE-P	A,S,C	20x70	DNM	G	Rust-destroyed.
altissima	364868	Per-stol.						Medium recovery after cut.
altissima	364869	Per-stol.	A,M,P	A,S,C		DNM	G	Rust-destroyed.
altissima	364870	Per-stol.	A,F,E-P	A,S,C	26x80	DNM	E	Good forage production. Rust-destroyed.
altissima	364872	Per-stol.						Destroyed, good to excellent forage, rapid recovery
altissima	364873	Per-stol.						Rust-destroyed.
altissima	364875	Per-stol.	A,C,E-P	A,S,C	36x75	DNM	E	Rust-destroyed. Destroyed, good forage, rapid recovery.
altissima	364876	Per-stol.						Rust-destroyed.
altissima	364877	Per-stol.	M,C,SE-P	M,S,C	25x50	DNM	G	Medium recovery after cut. Rust-destroyed.
altissima	364878	Per-stol.	A,M,P	M,S,C		DNM	G	Good forage production.
altissima	364879	Per-stol.	M,M,P	M,S,C		DNM	G	Rust-destroyed.
altissima	364880	Per-stol.	A,M,SE-P	A,S,C	36x130	DNM	E	Fair forage, very prostrate. Rust-destroyed.
altissima	364881	Per-stol.						Destroyed, excellent forage, rapid recovery.
altissima	364882	Per-stol.						Rust-destroyed.
altissima	364886	Per-stol.	M,C,SE-P	M,S,C	50x70	DNM	G	Rust-destroyed. Medium recovery after cut.
altissima	364887	Per-stol.	M,C,SE-P	M,S,C	30x60	DNM	G	Rust-destroyed. Medium recovery after cut. Rust-destroyed.

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<u>Species</u>	<u>PI</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Mature Size (cm.)</u>	<u>Months to Flowering</u>	<u>Vigor</u>	<u>Notes</u>
Hemarthria altissima	364888	Per-stol.	A,M,E-P	A,S,C	45x220	DNM	E	Good forage production. Rapid recovery and spread.
altissima	364889	Per-stol.						Rust-destroyed.
altissima	364890	Per-stol.	A,F,E-SE	VA,S,C	60x150	DNM	E	Rapid abundant recovery after cut. Uniform, fine leaves.
altissima	364891	Per-stol.						Rust-destroyed.
altissima	367897	Per-stol.	M,C,SE-P	M,S,C	45x100	DNM	G	
Ischaemum arcuatum	365510	Per-rhiz.		F,S,C	60x40	DNM	F	
Leersia hexandra	364346	Per-rhiz.	M,F,E-SE	F,S,C	25	DNM	G	Very rhizomatous, but sparse.
Panicum maximum	364963	Per-stol.	M,M,E	F,S,C	65	DNM	F	
Paspalum commersonii	364979	Per-stol.	F,C,SE	F,S,C	65	5	G	
commersonii	364980	Per-stol.	F,C,SE	F,S,C	75-20x58	5	G	
commersonii	365511	Per-stol.	F,C,SE	F,S,C	35-15x130	4	G	
distichum	364978	Per-rhiz. +Stol.	M,F,SE-P	F,S,C	20	2	F	
distichum	364981	Per-rhiz. +Stol.	M,F,P	M,S,C	11x80	5	F	
distichum	364982	Per-stol.	A,M,SE-P	M,S,C	40	2	G	
distichum	364983	Per-stol.	A,F,SE-P	F,S,C	20x30	2	F	
vaginatum	364368	Per-rhiz. +Stol.	A,M,SE-P	A,S,C	25x40	DNM	E	
vaginatum	364985	Per-rhiz. +Stol.	A,M,SE-P	A,S,C	45	5	G	
Pennisetum clandestinum	364350	Per-stol.	M,M,SE-P	M,S,C		DNM	F	Stolons to 70 cm.
macrourum	364988	Per-bunch	F,C,E	F,S,C	120	DNM	G	
macrourum	364989	Per-rhiz.	M,C,E	M,H,C	200	4	E	
macrourum	364990	Per-rhiz.	A,M,SE	M,H,C	80	DNM	G	
Setaria sphacelata	365017	Per-stol.	M,M,E	F,S,C	120-50x35	5		
Sporobolus virginicus	365029	Per-bunch	A,M,E	A,S,C	40x30	DNM	F	

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<u>Species</u>	<u>PI</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Mature Size(cm.)</u>	<u>Months to Flowering</u>	<u>Vigor</u>	<u>Notes</u>
<i>Stenotaphrum secundatum</i>	365031	Per-stol.	F, C, P	M, M, C	15x150	DNM	E	
<i>secundatum</i>	365032	Per-stol.	F, M, SE-P	F, S, C	33	DNM	F	
<i>Urochloa</i>								
<i>mosambicensis</i>	364371	Per-bunch	M, C, E-SE	M, S, B+C	120-30x40	3	G	Probably not <i>Urochloa</i> .
<i>mosambicensis</i>	365074	Per-stol.	M, M, E-P	F, S, C	100	DNM	F	
<i>mosambicensis</i>	365076	Per-bunch	F, C, SE	F, M, C	70-40x27	2	F	
<i>mosambicensis</i>	365084	Per-rhiz.	F, C, SE	F, M, C	100-60x60	2	G	
<i>mosambicensis</i>	365085	Per-stol.	M, M, E-SE	F, S, C	100-40x37	2	G	Poor forage production.
<i>mosambicensis</i>	365086	Per-rhiz. +Stol.	F, C, SE	F, S, C	30	4	F	
<i>mosambicensis</i>	365087	Per-stol.	A, C, SE	M, S, C	46	5	G	
<i>mosambicensis</i>	365088	Per-stol.	M, M, E-P	F, S, C	70-30x20	2	F	
<i>rhodesiensis</i>	365089	Per-stol.	M, M, SE-P	M, M, C		DNM	P	Leaf disease moderate, poor forage.
<i>stolonifera</i>	365518	Per-stol.	M, C, SE-P	F, S, C	15x40	F		

Dr. Oakes' South African Collection (Grown Outside)

<u>Species</u>	<u>PI</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Mature Size(cm.)</u>	<u>Months to Flowering</u>	<u>Vigor</u>	<u>Notes</u>
Chloris								
capensis	364836	Per-stol.	F,M,E	A,S,B+C	40-25x35	3	G	Good leaf density, small size.
gayana	364452	Per-stol.	F,F,SE	F,S,C	50-30x40	2	F	Fair forage production, weedy looking.
gayana	364453	Per-stol.	F,F,SE	F,S,C	55-20x85	2	F	Very open.
virgata	364456	Per-stol.	M,F,E	M,M,C	100-50x65	2	G	Rapid spreader.
virgata	364458	Per-stol.	F,F,SE	M,M,C	85-35x30	DNM	G	Good forage and spread.
Cymbopogon								
validus	364478	Per-rhiz.+Stol.		M,S,C	30x70	DNM	F	
Digitaria								
milanjiana	364541							
pentzii	364575	Per-bunch	M,F,E-SE	M,S,C	150-70x40	2	G	Died shortly after transplant. Fair forage production, lacks leaves.
pentzii	364599	Per-stol.	M,M,E	M,M,C	83-25x35	2	F	Weedy, spindly.
pentzii v. stolonifera	364617	Per-stol.	M,F,E	A,S,C	73-47x21	2	G	Very stoloniferous.
pentzii v. stolonifera	365505	Per-rhiz.+Stol.	M,F,SE	A,VS,C	44-15x60	2	E	Very soft leaf, vigorous.
valida	364695	Per-stol.	M,F,E	F,M,C	150-70x70	2	G	Not Digitaria.
Panicum								
coloratum	364947	Per-stol.	F,M,E	F,S,C	140-110x120	1	G	Weedy.
Paspalum								
distichum	364977	Per-stol.	M,F,E	M,S,C	18-10x80	2	G	Possibly decent low sod.
notatum	364349	Per-rhiz.	M,M,SE	A,S,C	45-20x50	3	G	Fair forage production.
Setaria								
chevalieri	364971	Per-bunch	F,M,SE	A,M,B+C	130-60x90	3	G	Leaves 4 cm. wide.

NOTES AND COMMENTS

LEGUMES AND OTHERS

Acaena myriophylla Lindl.

PI-348853 from Belgium was a perennial herb with sub-erect, tender fern-like leaves. It was grown in the cold frame, where it was solitary with the leaves radiating from a central stalk. It did not flower during the first and only year outside, but the plants did achieve a size of 5x70 cm. Not dense enough for a groundcover, and not hardy in the cold frame at Beltsville.

Adesmia microphylla Hook. & Arn.

PI-285109 from Chile was a solitary perennial with abundant, compound leaves. The tiny leaflets were nine per leaf. This legume remained in the greenhouse while at Beltsville, where it produced few, coarse, erect (staked) stems. The maximum size attained was 50x50 cm. Bright yellow flowers appeared in March, and maturity occurred in June. Most pods, however, were empty. Tripping produced few seed. White flies were a persistent problem on this plant.

Aeschynomene sp.

PI-322291 and PI-322295 were grown in the field. Both produced few, fine, erect to sub-erect stems and few, soft, cauline leaves. PI-322291 grew to 40x40 cm. but was severely grazed by deer. PI-322295 grew to 70x70 cm., and had no damage from the deer. Though both accessions were brought in for the winter, they died in the spring of the second year. Neither flowered or matured. Field G.

Alysicarpus vaginalis (L.) DC.

PI-322296 was a solitary legume from Brazil which flowered and died having set no seed in the greenhouse. With only fair vigor it produced few, fine, erect stems and few, soft, well distributed leaves. The size at flowering in September was 68x16 cm. Poor forage quantity.

Astragalus chaborasicus Boiss. & Haussk. ex Boiss.

PI-330693 from Iran was a weak, small non-hardy plant at Beltsville. The few stems were very fine and prostrate with an evenly distributed, medium number of soft leaves. The largest size attained was 2x15 cm. The plants never flowered or matured. Field Ic.

Astragalus glycyphyllos L.

PI-345959 from Norway was a vigorous milkvetch with ground covering capability, but only fair forage production. It did not tolerate wet conditions, but in a well-drained area spring and fall recovery was early and abundant. The few, medium-textured, sub-erect stems had moderately abundant, soft leaves. Maturity occurred in July, but the size in October was much larger at 20x65 cm. Field B₃.

LEGUMES AND OTHERS

Atriplex hortensis L.

An erect, single-stemmed annual up to 250 cm. Cultivated in Europe as a vegetable.

PI-345962 from Norway was grown in the greenhouse at the NPMC. It had a single stem, erect with medium thickness. The leaves were few in number and soft. Maximum size was 110x35 cm. at maturity in May. Better thought of as a vegetable than a conservation plant.

Atriplex nitens Schkuhr

PI-345963 from Norway was very much like Atriplex hortensis, except a common weed rather than a vegetable species. The maximum size recorded was 30x10 cm., much smaller than Atriplex hortensis. Also single-stemmed, erect and medium thickness bearing medium numbers of soft, cauline leaves. A worthless accession in the greenhouse.

Brachylaena uniflora Harv.

PI-365497 from Natal was a woody compositae with a poplar-like appearance. The stems and leaves are covered with a white, downy pubescence. The single main stem and branches supported a few, dentate leaves and grew to a size of 160x50 cm. in the greenhouse. It was sent to Experiment, Georgia for further trials.

Coronilla scorpioides (L.) Koch.

An annual weed of southern Europe, often found in dry waste places with limestone influence. Height to 40 cm., yellow flowers.

BN-20844 had poor vigor at Beltsville. Most plants died in the field after attaining a size of 15x25 cm. Few stems and leaves were produced. None of the plants bloomed. Field D.

Cytisus canariensis Steud.

BN-19688 from the Canary Islands was fairly vigorous in the greenhouse at Beltsville, growing to 100x70 cm. in two years. It was completely defoliated by spider mites, but came back to produce tiny yellow flowers and seed. The Mississippi PMC received seed and the original plant.

Dianthus deltoides L.

BN-10880 is from a commercial source. It was a moderately vigorous, slowly spreading perennial. It was unhappy in the summer heat at Beltsville. This plant acted very much like crownvetch i.e., dying back during late July and August. Abundant stems and leaves were noted in early summer. A sub-erect habit and fine, soft textures were also noted. At flowering in June the size was 35-23x40 cm. The flowers were pink and moderate in number. Has some possibility for a groundcover. Field G.

LEGUMES AND OTHERS

Dorycnium hirsutum Ser.

BN-9871 from California was a slow, tender accession. Though a perennial, it winterkilled at Beltsville before producing any seed. The stems were medium in number, fine and sub-erect to prostrate. The soft, pubescent leaves were moderately abundant and well distributed. The largest recorded size was 10x25 cm. Not worth much in Beltsville. Field Ic.

Gaillardia sp.

Two rod rows of BN-19639 from Georgia PMC were seeded directly in the fields. An excellent stand of dense vigorous plants was the result. The solitary annual plants had abundant stems and leaves. The coarse stems were erect bearing soft leaves to a mature size of 50-45x70 cm. in August. Attractive red flowers with yellow petal tips bloomed from mid-July to the first of September. Most of the seed had no fill so the production was rated poor. Despite the poor seed fill numerous seedlings did emerge around the parent plants. It has possibilities for ornamental use and specific applications in conservation. Field G.

Galenia secunda (Thunb.) Sond.

Two accessions were grown at the NPMC and both, though apparently not hardy, show some conservation potential.

PI-346784 from western Australia was a solitary prostrate groundcover with moderate aggressiveness. The abundant stems and leaves produced a lush green, dense cover 20x56 cm. in size by mid-August. The plants were not affected by drought or heat in any way nor did they have insect or disease problems. Unfortunately, they did not flower and hence, produced no seed. No evidence of grazing by deer or rabbits was noted. Field B.

PI-346875 from Israel was like the above, but more vigorous, growing to 20x180 cm. in October. Seed was distributed to the California PMC in 1970. Field G.

Hypericum spp.

Five species were grown for two years at Beltsville in the cold frame. The potential for them seems to be solely ornamental.

<u>PI</u> <u>and</u> <u>Species</u>	<u>Origin</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Maturity</u>		<u>Vigor</u>	<u>Notes</u>
					<u>Size(cm.)</u>	<u>Date</u>		
344584 chinense L.	Czech.	SE	F,M,E	F,S,C	100x43	10	F	Large yellow flowers Solitary.
345995 perforatum L.	Norway	SE	A,F,SE	A,S,C	21x40	9	F	Bright yellow flowers (almost 4 cm. across) Short rhizomes.

LEGUMES AND OTHERS

Hypericum spp.

<u>PI</u> and <u>Species</u>	<u>Origin</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Maturity</u>		<u>Vigor</u>	<u>Notes</u>
					<u>Size(cm.)</u>	<u>Date</u>		
345996 <u>rumelicum Boiss.</u>	Norway	SE	F,F,SE	M,S,C	25x25	8	F	Yellow flowers. Short rhizomes.
345997 <u>tetrapterum Fr.</u>	Norway	E	M,M,E	MA,S,C	30x40	10	F	Yellow flowers. Short rhizomes. Upper half of pH.
345998 <u>sp.</u>	Norway	E	M,M,E	M,S,C	30-20x16	10	G	Yellow flowers. Pubescent.

Ilex crenata Thunb.

An evergreen shrub or small tree native to Japan. Found in thickets and wet places with some cultivars in gardens.

'High Light' PI-316588 had good vigor (in comparison with other Japanese Ilex) and an erect habit. In six years, and after at least three transplantings, it was 60x40 cm. in size. The plant was male. The first-year stems are golden-yellow. Now in NPMC landscaping.

Ilex crenata ssp. radicans (Nakai) Tatewaki

Native to wet, swampy places in Japan. Low creeping stems and branches.

PI-276082 was sub-erect to prostrate and slow growing. After six years the size was 22x25 cm. with good density noted. The winter of 1969-1970 caused some damage to this species. Now in landscaping.

Ilex rugosa F. Schmidt

A dwarf, long-creeping shrub, native to coniferous woods of Japan.

PI-275798 was a small (20x27 cm.) fairly open shrub with sub-erect habit. Now in the NPMC landscape. Female plant.

Indigofera sp.

PI-339906 from El Salvador was a warm, tender perennial with an erect, bunch habit. It grew vigorously through the summer producing multiple woody stems over 100 cm. The abundant soft leaves were well distributed. Red flowers were noted from mid-September until mid-October, but the plants died after transplanting to the greenhouse so no seed was collected. This plant might have some value in the extreme southern United States. No seed available. Cold Frame.

Lathyrus pratensis L.

PI-346002 from Norway, though rhizomatous and sub-erect, was in direct contrast otherwise to Lathyrus sylvestris which follows. Few stems and leaves with fine, soft texture were noted. The vigor was poor, growing only to a size of 18x28 cm. in August. The plants did not flower. Field G.

LEGUMES AND OTHERS

Lathyrus sylvestris L.

PI-346003 was a good, rhizomatous groundcover at Beltsville, but would not flower over a period of two years. Heat and drought tolerance were noted with excellent vigor in mid-August. The size then was 40x85 cm. limited by the cultivator. Abundant stems and leaves produced a dense sub-erect cover. Though the foliage was very soft, no grazing by deer was noted. Field G.

Lathyrus laetiflorus Greene

PI-378182 from California was a solitary perennial with pubescence covering all surfaces. It was grown in the greenhouse for two years, where it displayed variable vigor with repetitive attacks of spider mites. Though it produced medium numbers of viny stems to 250 cm. in height, the leaflets were not dense enough to provide a good cover. Flowering occurred freely every six months, but seed production was poor. The plants were moved outside for the third summer, but died by October.

Lespedeza thunbergii (DC.) Nakai

PI-286481 from Japan was a vigorous, bushy, semi-woody plant at Beltsville. The few, erect stems originated from the base each year bearing abundant, soft leaves. The mature size was 155x160 cm. in the second growing season. Bloom began about mid-August and lasted until mid-October. Maturity occurred in late October. Generally smaller and bushier than BN-3532 in the NPMC production block. Field G.

Lotus corniculatus L.

PI-319822 from Norway was a poor trefoil at Beltsville, declining from 35 to 2 plants in two years. Spring growth was good, but by mid-June rapid decline had begun. Yellow flowers appeared in early June followed by maturity in August. Abundant, fine, prostrate stems and abundant, soft leaves were noted on spring growth. By October the plants were poor. Field G.

BN-5489 from Minnesota was also grown. It maintained good vigor and growth except in the hot months of the summer. Abundant stems and leaves with soft texture and a prostrate habit were noted. The size noted at bloom in mid-June was 45x85 cm. Both vigor and forage production were rated good at that time. Mature seed was not produced during the second year after severe summer injury. Field G.

Lupinus arboreus Sims

Two accessions were grown in the cold frame. Both had poor vigor and died before flowering.

<u>BN</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Size(cm.)</u>	<u>Notes</u>
20871	Sol.	F,M,E	M,S,C	22x14	Severe heat injury.
20872	Sol.	F,C,E	M,S,C	27x18	Severe heat injury.
'Albus'					

LEGUMES AND OTHERS

Lupinus mutabilis Sweet.

PI	Origin	Habit	(6-inch)	Leaves	Maturity		Notes
			Stems		Size(cm.)	Date	
289175	Hungary	Ann.-Sol.	C,E	M,S,C	72x50	6	Diseased. Required hand tripping. No cover.
308050	Czech.	Ann.-Sol.	C,E	M,S,C	68x50	5	Leaves narrower and acute. No cover. Hand tripped.
316290	Argentina	Ann.-Sol.	C,E	M,S,C	75x60	6	Diseased. No cover. Hand tripped.

Reseda alba L.

Native to southern Europe, where it is found on disturbed land as an ornamental.

PI-348874 from Belgium was an annual with prostrate leaves and erect stems. The single stem branched considerably over the summer. Size at flowering was 50x17 cm. with white flowers at the tip of each branch. The seed was mature in capsules by August. No obvious conservation potential. Cold Frame.

Trifolium agrarium L.

PI-346035 from Norway was an annual or biennial with a solitary habit. The few, fine, prostrate stems had abundant, soft leaves in well distributed fashion. Poor vigor was compounded by a severe spider mite attack. The maximum size was 10x30 cm.

Trifolium elongatum Willd.

PI-253200 from Yugoslavia was a good deer browse, but that limited further evaluation. The deer kept it pruned to about 25x35 cm. with only medium numbers of branches and leaves. The habit was soft, sub-erect, and rhizomatous. Poor seed quantity was obtained from the few blooms, which were not eaten. Maturity occurred in mid-July. Hardy perennial. We will continue to grow this species. Looks akin to Trifolium pratense, but the vegetation is not as succulent or as tall. Field G.

Trifolium glomeratum L.

PI-346039 from Madeira was a solitary annual clover with abundant, prostrate stems. Medium numbers of soft, cauline leaves were noted. Maturity occurred in late June at a size of 7x100 cm. Vigor was rated good despite a moderate mite infestation and a slow start. This accession was not as dense as other clovers, and was rated fair in forage production. Greenhouse.

LEGUMES AND OTHERS

Trifolium lupinaster L.

Trifolium lupinaster accessions are generally unsuited to the warm humid Beltsville climate, and PI-346041 from Norway was no exception. It died immediately after maturity in August. Few stems and leaves were produced in the cold frame and the largest size was 5x6 cm. This perennial species is unusually tolerant of cold climates.

Trifolium pratense L.

PI-346046 from Norway was grazed very hard by deer and suffered from mildew. As a result of entering the first winter with poor vigor it died. This red clover had few, soft, basal leaves to 10x12 cm. Maturity occurred in late August. Field G.

Trifolium repens L.

PI-346047 from Norway was grazed hard by rabbits, and had only fair vigor at Beltsville. The spread of stolons was very slow compared to more vigorous accessions. In two years it produced a mature size of 5x35 cm. with medium numbers of prostrate stems and only medium amounts of soft leaves. Poor seed quantity was obtained. Field G.

Trifolium uniflorum L.

A woody, tap-rooted perennial common to dry pastures and stony places in the eastern Mediterranean Region.

PI-330361 from Turkey only survived one year at Beltsville. A solitary plant with few, fine, prostrate stems and medium numbers of soft leaves. At bloom in mid-April (in the Greenhouse) the size was 3-1x14 cm. The single, pinkish-white flowers appeared again in mid-June. After maturity in July the plants were moved to the cold frame with apparently good vigor. They were dead the following spring.

Vicia amphicarpa Dorthes

A native annual of dry places on the Mediterranean littoral. The stems are subterranean and some of the flowers are also produced below the surface.

BN-21861 was a small plant with only fair vigor in the greenhouse. Medium numbers of stems and leaves were produced by flowering in June. The flowers above ground were bluish-purple. No sub-surface flowers were found. Maturity occurred in mid-July at a size of 10x70 cm. Identity is questioned.

Vicia angustifolia L.

PI-121275 from Turkey had good vigor and size in the greenhouse, but lacked density. This solitary annual produced abundant, sub-erect to ascending stems, but only moderate numbers of soft leaves. The mature size was 10x200 cm. The purple flowers bloomed from mid-April to May.

LEGUMES AND OTHERS

Vicia baicalensis (Turcz.) B. Fedtsch.

PI-378090 from the U.S.S.R. was a vigorous but not a very dense accession. This solitary perennial had few, medium-textured, sub-erect to prostrate stems bearing a moderate number of soft leaves. The size at mid-bloom in July was 60x100 cm. Full maturity was in late August, but a poor seed set limited the collection. Greenhouse culture.

Vicia costata Ledeb.

BN-18955 from the U.S.S.R. was a solitary perennial with little apparent conservation potential. It did not bloom during three years in the greenhouse. Poor vigor and poor cover from few stems and leaves were noted. The largest size attained was 55x50 cm.

Vicia cracca L.

Two accessions were grown in the field. Both had poor vigor and did not bloom in two years at Beltsville.

PI-346065 from Norway was rhizomatous, but produced only a few, fine stems and very few, soft leaves. The largest size recorded was 23x44 cm. Field G.

PI-346066, also rhizomatous and from Norway, had fewer stems than PI-346065 and only reached 17x36 cm. in size. Field G.

Vicia elegans Guss.

BN-19334 was a rhizomatous perennial from Turkey with abundant leaves, but only few stems. In the greenhouse it had only fair vigor, growing to 15x52 cm. Aphids and a moderate leaf disease reduced its vigor and it died midway through the second growing season.

Vicia exigua Nutt.

Two accessions of California vetch were grown in the greenhouse. These solitary annuals produced dense, compact cover with abundant stems and leaves.

BN-21862 had more leaves and grew to a size of 10x86 cm. The flowers were light purple and matured from May 1 to mid-June. Shattering was excessive.

BN-21863 was smaller at 18x70 cm. and had darker, purple flowers. It matured as above, but did not shatter as readily. A light spider mite infestation was noted.

Vicia gregaria Boiss. & Heldr.

BN-19336 from Turkey was a solitary perennial, which did not show much value in the greenhouse. The few, medium-textured, prostrate stems were covered with pubescence, as were the few soft leaves. The plant never matured in two years and remained in poor vigor until discarded. Maximum stem length was 50 cm.

Vicia incana Gouan

PI-351085 from France was a cool season, hardy, rhizomatous perennial, but it lived only one season at Beltsville. The few, fine, prostrate stems grew to a maximum length of 40 cm. The leaves were soft and few in number. A worthless accession with poor vigor. Field G.

LEGUMES AND OTHERS

Vicia minutiflora Dietr.

Two accessions were grown in the greenhouse at the NPMC, both of which were solitary annuals.

BN-20421 from Arkansas was smaller but denser than the other accession. Abundant stems and leaves were noted. The prostrate stems were medium in texture bearing soft leaves. Maturity occurred in April at a size of 10x60 cm. Light purple flowers were noted about 5 mm. in length.

BN-20425 from Alabama had fewer stems and grew to 15x80 cm. at maturity. Shattering was excessive.

Vicia sepium L.

PI-346069 from Norway was a perennial rhizomatous plant with very dense growth but small size. It had good vigor yet failed to bloom in the greenhouse. The stems were fine, sub-erect to prostrate and medium in number bearing well distributed, abundant, soft leaves. Mature size was 70x30 cm. the first year and 11x20 cm. in the second. The plant died after being transferred outside.

Vicia sp.

Six accessions from various origins were grown in the greenhouse. The unverified names are included below. BN-21878 has the most promise.

<u>BN</u> and <u>Species</u>	<u>Origin</u>	<u>Habit</u>	<u>Stems</u>	<u>Leaves</u>	<u>Maturity</u>		<u>Vigor</u>	<u>Notes</u>
					<u>Size(cm.)</u>	<u>Date</u>		
21865 <i>hirsuta</i> (L.) S.F. Gray	India	Ann.-Sol.	M,M,SE-P	A,S,C	7x100	3-6	F-G	Flowers 3 mm. Very light purple.
21877 <i>bungei</i> Ohwi	China	Per.-Sol.	M,M,SE	M,S,C	10x90	9	G	Large leaves.
21878 <i>litvinovii</i> Boiss.	U.S.S.R.	Ann.-Sol.	VA,VF,SE	VA,S,C	15x150	5-6	E	Very dense. Good cover.
21882 <i>obscura</i> Vog.	Brazil	Per.-Sol.	M,M,SE	M,S,C	20x110	5-7	G	Purple flowers.
21889 <i>pseudo-orobus</i> Fisch. & Mey.	China	Per.-Rhiz	M,M,P	M,M,WD	8x50	8-11	F	Severe mite damage.
21899 <i>vicina</i> Clos	Chile	Ann.-Sol.	A,M,SE	M,S,C	5x80	5-6	G	Shattering.

Zanthoxylum simulans Hance

Flatspine prickleyash closely resembled black locust in appearance. The stem and branches were woody, coarse and erect. The compound leaves were medium in abundance, harsh, and had paired prickles at the base. The largest size recorded was 170x110 cm. This weedy, open accession produced no flowers, and was destroyed after three years in the cold frame.

SUMMARY OF REIDENTIFICATIONS - 1972

PI No.	BN No.	Original Identification	Reidentified As:
--	2230	Lespedeza maximowiczii Schneid.	Lespedeza bicolor Turcz.
--	4920	Lespedeza robusta Nakai	Lespedeza thunbergii (DC.) Nakai
--	15856	Aristida sp.	Aristida plumosa L.
--	20628	Eragrostis major Host	Eragrostis cilianensis (All.) Lut.
--	22485	Sesleria coerulea Arduino.	Festuca rubra L.
19707	19333	Vicia dasycarpa Ten.	Lathyrus laetiflorus Greene
165715	5118	Crotalaria sp.	Crotalaria incana L.
171943	5508	Eragrostis sp.	Eragrostis echinoclroides Stapf
172277	5610	Indigofera cf. prunosa Welw. ex Baker	Crotalaria sp.
173636	19917	Bothriochloa intermedia (R.Br.) A. Camus	Bothriochloa ischaemum (L.) Keng
206883	19705	Calamagrostis epigejos (L.) Roth	Polypogon monspeliensis (L.) Desf.
209168	19126	Bothriochloa glabra (Roxb.) A. Camus	Panicum virgatum L.
213876	15991	Andropogon scoparius Michx.	Schizachyrium scoparium (Michx.) Nash
220586	19708	Calamagrostis pseudophragmites (Hall f.) Koel.	Eragrostis curvula (Schrad.) Nees
226119	-	Hydrangea scandens Ser. in DC.	Hydrangea scandens ssp. liukuensis (Nakai) McClintock
230111	15281	Bromus inermis Leyss.	Bromus stenostachyus Boiss.
234686	15845	Astragalus falcatus Lam.	Astragalus glycyphyllos L.
235070	15681	Astragalus falcatus Lam.	Astragalus glycyphyllos L.
239164	19927	Bothriochloa intermedia (R.Br.) A. Camus	Bothriochloa glabra (Roxb.) A. Camus
244282	7925	Medicago auriculata All.	Medicago sp.
245728	19934	Bothriochloa intermedia (R.Br.) A. Camus	Bothriochloa ischaemum (L.) Keng
284112	13069	Bromus willdenowii Kunth	Bromus macrostachys Desf.
292409	14379	Lotus tenuifolius Presl.	Lotus tenuis L.
293883	15931	Hedera helix v. taurica	Hedera helix L. 'Yalta'
310006	16573	Eragrostis sp.	Eragrostis airoides Nees
310007	16574	Eragrostis sp.	Eragrostis airoides Nees
310009	16576	Eragrostis sp.	Eragrostis airoides Nees
310015	16582	Eragrostis sp.	Eragrostis airoides Nees
310317	16884	Sporobolus sp.	Sporobolus indicus (L.) R.Br.
310408	16926	Kochia prostrata (L.) Schrad.	Kniphofia cf. foliosa Hochst.
313960	17334	Agropyron gracillimum Nevski	Agropyron stipifolia Czern. ex Nevski

SUMMARY OF REIDENTIFICATIONS - 1972

PI No.	BN No.	Original Identification	Reidentified As:
314204	17410	Agropyron ugamicum Drob.	Agropyron mutabile Drob.
314676	17557	Elymus aff. alaicus Korsh. ex Char.	Elymus karataviensis Roshev.
314678	17559	Elymus sp.	Elymus karataviensis Roshev.
315704	4320	Lathyrus maritimus Bigel.	Lathyrus japonicus v. glabra
316951	17949	Crotalaria sp.	Crotalaria anagyroides HBK.
316954	17952	Crotalaria sp.	Crotalaria lanceolata E. Mey.
322399	17952	Crotalaria sp.	Crotalaria lanceolata E. Mey.
322402	18341	Crotalaria sp.	Crotalaria incana L.
322403	18342	Crotalaria sp.	Crotalaria spectabilis Roth
322405	18344	Crotalaria sp.	Crotalaria incana L.
322408	18345	Crotalaria sp.	Crotalaria lanceolata E. Mey.
322409	18346	Crotalaria sp.	Crotalaria lanceolata E. Mey.
322502	18414	Desmodium sp.	Desmodium distortum (Aubl.) Macbr.
322512	18417	Desmodium sp.	Desmodium distortum (Aubl.) Macbr.
322513	18418	Desmodium sp.	Desmodium distortum (Aubl.) Macbr.
322514	18419	Desmodium sp.	Desmodium distortum (Aubl.) Macbr.
322520	18420	Desmodium sp.	Desmodium distortum (Aubl.) Macbr.
325500	18700	Trifolium neglectum C.A. Mey.	Trifolium fragiferum L.
336997	18880	Crotalaria sp.	Crotalaria incana L.
344565	19268	Astragalus glycyphyllos L.	Astragalus cicer L.
346021	19424	Poa pratensis L.	Poa compressa L.
346031	19434	Sesleria argentea Savi	Festuca rubra L.
348931	19582	Paspalum sp.	Paspalum scrobiculatum L.
364354	21699	Brachiaria xantholeuca Stapf	Brachiaria xantholeuca (Hack.) Stapf
364458	21020	Chloris sp.	Chloris virgata Sw.
364836	22347	Eragrostis sp.	Chloris capensis (Houtt.) Thell.
364971	21346	Panicum maximum Jacq.	Setaria chevalieri Stapf ex Stapf & C.E. Hubb.
364977	21349	Paspalum commersonii Lam.	Paspalum distichum L.
364978	21350	Paspalum commersonii Lam.	Paspalum distichum L.
365026	21683	Sporobolus capensis (Willd.) Kunth	Sporobolus africanus (Poir.) Robyns & Tournay
365497	21007	Brachylaena sp.	Brachylaena uniflora Harv.
369293	22030	Phleum pratense L.	Phleum phleoides (L.) Karst.
376213	21369	Urochloa mosambicensis (Hack.) Dandy	Digitaria sp.

SUMMARY OF REIDENTIFICATIONS - 1972

PI No.	BN No.	Original Identification	Reidentified As:
376214	21960	Sporobolus virginicus (L.) Kunth	Digitaria sp.
377582	20514	Asperella coreana (Honda) Nevski	Elymus coreanus Honda
378046	20553	Bromus macrathelus Meyen.	Bromus sp.
378084	20810	Stipa tenacissima Jusl.	Stipa sp.
378090	21884	Vicia sp.	Vicia baicalensis (Turcz.) B. Fedtsch.
378182	19232	Lathyrus sp.	Lathyrus laetiflorus Greene
378652	19641	Brachiaria sp.	Brachiaria eminii (Mez) Robyns

CHANGES IN NOMENCLATURE

Original Name	New Name
Albizzia	Albizzia
Arachis glabrata v. hagenbeckii (Harm) F. J. Herman	Arachis glabrata v. hagenbeckii (Harm) F. J. Herman
Danthonia cirrhata Hack. & Arech.	Danthonia cirrhata Hack. & Arech.
Digitaria adscendens (HBK.) Henr.	Digitaria ciliaris (Retz.) Koel.
Lotus coimbrinsis Willd.	Lotus conimbricensis Brot.
Onobrychis viciaefolia Scop.	Onobrychis viciaefolia Scop.
Phaseolus aconitifolius Jacq.	Vigna aconitifolia (Jacq.) Marechal
Phaseolus aureus Roxb.	Vigna radiata (L.) Wilczek
Phaseolus calcaratus Roxb.	Vigna umbellata (Thunb.) Ohwi & Ohashi
Phaseolus mungo L.	Vigna mungo (L.) Hepper
Sorghum miliiforme (Hack.) Snowden	Sorghum bicolor (L.) Moench.
Stizolobium deeringianum Bort.	Mucuna deeringiana (Bort.) Merr.
Trifolium desvauxii Boiss. & Bl.	Trifolium purpureum v. desvauxii (Boiss. & Bl.) Post ex Sol.
Trifolium filiforme L.	Trifolium dubium Sibth.
Trifolium sarosienne Hazsl. ex Neibr.	Trifolium medium ssp. sarosienne (Hazsl.) Simonkai
Trifolium xerocephalum Fenzl	Trifolium argutum Banks ex Sol.
Vigna cylindrica (L.) Skeels	Vigna unguiculata ssp. cylindrica (L.) Verdc.
Vigna sesquipedalis (L.) Fruw.	Vigna unguiculata ssp. sesquipedalis (L.) Verdc.
Vigna sinensis (L.) Savi ex Hassk.	Vigna unguiculata ssp. unguiculata (L.) Walp.

Information compiled from Summaries No. 46, 47, 48, and 49, January through December 1972, from Plant Introduction Investigations, New Crop Research Branch, ARS.

National Plant Materials Center
Verification of Plant Identifications

PI No.	BN No.	Date	Name of Plant
276242	19616	2-9-73	<i>Paspalum cromyorchizon</i> Trin. ex Doell.
303967	19617	2-9-73	<i>Paspalum cromyorchizon</i> Trin. ex Doell.
310059	16626	2-9-73	<i>Paspalum cromyorchizon</i> Trin. ex Doell.
310071	16638	2-9-73	<i>Paspalum cromyorchizon</i> Trin. ex Doell.
345981	19384	12-7-72	<i>Festuca gigantea</i> (L.) Vill.
364360	21695	12-7-72	<i>Eragrostis lappula</i> Nees
364814	21736	12-1-72	<i>Eragrostis horizontalis</i> Peter
364815	21737	12-1-72	<i>Eragrostis horizontalis</i> Peter
364816	21738	12-1-72	<i>Eragrostis horizontalis</i> Peter
364818	21740	3-22-73	<i>Eragrostis lehmanniana</i> Nees
364819	21741	3-22-73	<i>Eragrostis lehmanniana</i> Nees
364820	21742	3-22-73	<i>Eragrostis lehmanniana</i> Nees
364821	21743	3-22-73	<i>Eragrostis lehmanniana</i> Nees
364823	21730	12-1-72	<i>Eragrostis rigidior</i> Pilger
364825	21732	1-29-73	<i>Eragrostis rotifer</i> Rendle
365505	21147	1-29-73	<i>Digitaria pentzii</i> v. <i>stolonifera</i> (Stapf) Henr.
378056	20811	1-29-73	<i>Stipa tenuissima</i> Trin.
378082	20629	2-9-73	<i>Eragrostis pilosa</i> (L.) Beauv.

National Plant Materials Center

Domestic Distribution of Seed in 1972

Genera	Number of Packets Distributed to:			
	North- east	Mid- west	South- east	West
Adesmia.....				8
Agropyron.....				2
Astragalus.....			1	1
Atriplex.....			5	10
Bothriochloa.....				6
Brachiaria.....				9
Bromus.....		1	1	
Calamagrostis.....			1	
Calopogonium.....				10
Canavilia.....			1	1
Cantharospermum.....				1
Carex.....				1
Cassia.....				36
Centrosema.....			4	27
Cleistachne.....			2	
Clitoria.....				18
Crotalaria.....				1
Cunninghamia.....				1
Dactylis.....		1		2
Desmodium.....				98
Desmostachya.....			1	
Digitaria.....				1
Dorycnium.....			1	
Echinochloa.....				1
Elymus.....		2	3	
Eragrostis.....	8		1	
Festuca.....			8	3
Gaudinia.....			1	1
Glycine.....	2			
Hedysarum.....		1		
Holcus.....			1	
Indigofera.....				40
Kochia.....				11
Lathyrus.....			1	1
Lepturus.....				1
Lespedeza.....	1			3
Leucaena.....				4
Lolium.....			3	2
Lotus.....	3	55		3
Medicago.....			4	
Myrica.....	1	1	2	
Ononis.....				1

National Plant Materials Center

Domestic Distribution of Seed in 1972

Genera	Number of Packets Distributed to:			
	North- east	Mid- west	South- east	West
Parochetus.....:		1		1
Pennisetum.....:		1		
Phalaris.....:				1
Pinus.....:				1
Poa.....:	15		1	3
Rhynchosia.....:				23
Sesbania.....:				14
Sporobolus.....:				1
Stizolobium.....:				13
Stylosanthes.....:				6
Themeda.....:			4	
Trifolium.....:			1	1
Urochloa.....:			1	
Vicia.....:	3		13	7
Zoysia.....:		4		
Total:	33	67	61	375

National Plant Materials Center

Domestic Distribution of Vegetative Material in 1972

BN No.	Species	Type and Amount of Material
20988	<i>Acroceras macrum</i> PI-364374	stolons
20989	<i>Acroceras macrum</i> PI-364375	stolons
20990	<i>Acroceras macrum</i> PI-364376	stolons
19798	<i>Alnus rugosa</i>	31 plants
20991	<i>Axonopus compressus</i> PI-365101	stolons
19802	<i>Axonopus micay</i> PI-358060	stolons
20390	<i>Axonopus micay</i> PI-365630	stolons
22374	<i>Bothriochloa glabra</i> PI-364394	stolons
20992	<i>Bothriochloa insculpta</i> PI-364396	stolons
20993	<i>Bothriochloa insculpta</i> PI-364397	stolons
20994	<i>Brachiaria arrecta</i> PI-364399	stolons
20995	<i>Brachiaria brizantha</i> PI-364400	stolons
21000	<i>Brachiaria brizantha</i> PI-364405	stolons
21001	<i>Brachiaria dictyoneura</i> PI-364407	stolons
21002	<i>Brachiaria dictyoneura</i> PI-364408	stolons
21003	<i>Brachiaria humidicola</i> PI-364409	stolons
21005	<i>Brachiaria humidicola</i> PI-365104	stolons
21006	<i>Brachiaria nigropedata</i> PI-364411	stolons
19307	<i>Cotoneaster horizontalis</i> f. <i>perpusilla</i>	15 plants
17148	<i>Cotoneaster microphylla</i> PI-274972	6 plants
15102	<i>Cotoneaster rotundifolia</i> PI-297598	15 plants
19308	<i>Cotoneaster salicifolia</i> 'Parkteppich' PI-265031	25 plants
19309	<i>Cotoneaster</i> x <i>watereri</i> 'Herbstfeuer' PI-265033	23 plants
19821	<i>Cornus stolonifera</i> 'Flaviramea'	15 plants
19575	<i>Cupressocyparis leylandi</i> 'Leighton Green'	30 plants
22377	<i>Cymbopogon validus</i> PI-364478	stolons
4158	<i>Cynodon dactylon</i> 'Tufcote'	stolons
21021	<i>Cynodon dactylon</i> PI-364484	stolons
22145	<i>Cynodon plectostachyus</i> PI-370124	stolons
19688	<i>Cytisus canariensis</i>	1 plant
16950	<i>Desmodium cinereum</i> PI-311104	10 plants
16952	<i>Desmodium intortum</i> PI-311122	10 plants
17091	<i>Desmodium intortum</i> PI-312129	10 plants
21046	<i>Digitaria milaniana</i> PI-364530	stolons
21077	<i>Digitaria natalensis</i> PI-364563	stolons
21090	<i>Digitaria pentzii</i> PI-364575	stolons
21091	<i>Digitaria pentzii</i> PI-364576	stolons
21110	<i>Digitaria pentzii</i> PI-364595	stolons
21113	<i>Digitaria pentzii</i> PI-364598	stolons
21114	<i>Digitaria pentzii</i> PI-364599	stolons
21136	<i>Digitaria pentzii</i> v. <i>stolonifera</i> PI-364617	stolons
21147	<i>Digitaria pentzii</i> v. <i>stolonifera</i> PI-365505	stolons
21208	<i>Digitaria valida</i> PI-364688	stolons
21222	<i>Digitaria valida</i> PI-364702	stolons
21227	<i>Digitaria valida</i> PI-364707	stolons
21231	<i>Digitaria valida</i> PI-364711	stolons

National Plant Materials Center

Domestic Distribution of Vegetative Material in 1972

BN No.	Species	Type and Amount of Material
21238	<i>Digitaria valida</i> PI-364718	stolons
21245	<i>Digitaria valida</i> PI-364725	stolons
21246	<i>Digitaria valida</i> PI-364726	stolons
21279	<i>Digitaria valida</i> PI-364759	stolons
21280	<i>Digitaria valida</i> PI-364760	stolons
22143	<i>Digitaria valida</i> PI-370125	stolons
21960	<i>Digitaria</i> sp. PI-376214	2 plants
21717	<i>Echinochloa holubii</i> PI-364795	stolons
21286	<i>Echinochloa pyramidalis</i> PI-364798	stolons
22375	<i>Echinochloa pyramidalis</i> PI-365509	stolons
18180	<i>Elymus arenarius</i> PI-319819	22 plants
19380	<i>Elymus arenarius</i> PI-345977	22 plants
19381	<i>Elymus arenarius</i> PI-345978	22 plants
19382	<i>Elymus arenarius</i> PI-345979	22 plants
19557	<i>Elymus arenarius</i> PI-348865	22 plants
21287	<i>Eriochloa borumensis</i> PI-364837	stolons
21289	<i>Eriochloa borumensis</i> PI-364839	stolons
21290	<i>Eriochloa borumensis</i> PI-364840	stolons
17493	<i>Euonymus fortunei</i> 'Longwood' PI-275073	stolons
21293	<i>Hemarthria altissima</i> PI-364861	stolons
19822	<i>Hypericum</i> sp. 'Hidcote'	4 plants
18038	<i>Ilex sugerokii</i> PI-275800	2 plants
21324	<i>Ischaemum arcuatum</i> PI-365510	stolons
19654	<i>Juniperus chinensis</i> 'Mas'	2 plants
18528	<i>Juniperus conferta</i> PI-323932	748 plants
19310	<i>Juniperus horizontalis</i> 'Wiltonii'	24 plants
19515	<i>Juniperus virginiana</i>	9 plants
21326	<i>Leersia hexandra</i> PI-364346	stolons
19153	<i>Ligustrum microcarpum</i> PI-324998	10 plants
18753	<i>Ligustrum ovalifolium</i>	5 plants
NC-69-23	<i>Ligustrum vulgare</i>	50 plants
18752	<i>Ligustrum</i> sp.	12 plants
19168	<i>Ligustrum</i> sp.	50 cuttings, 15 plants
15108	<i>Olea europaea</i> PI-298030	6 cuttings
21349	<i>Paspalum distichum</i> PI-364977	stolons
21360	<i>Pennisetum clandestinum</i> PI-364350	stolons
21361	<i>Pennisetum macrourum</i> PI-364988	stolons
21362	<i>Pennisetum macrourum</i> PI-364989	stolons
21363	<i>Pennisetum macrourum</i> PI-364990	stolons
19767	<i>Populus x canadensis</i> PI-355933	8 plants
19768	<i>Populus x canadensis</i> PI-355934	20 plants
19769	<i>Populus x canadensis</i> PI-355935	4 plants
19770	<i>Populus x canadensis</i> PI-355936	18 plants
19771	<i>Populus x canadensis</i> PI-355937	2 plants

National Plant Materials Center

Domestic Distribution of Vegetative Material in 1972

BN No.	Species	Type and Amount of Material
17709	Rosa roxburghii PI-315872	100 cuttings
12055	Rosa rugosa	cuttings
12059	Rosa rugosa	cuttings
22462	Saccharum hybrid PI-369716	cuttings
21364	Salix capensis PI-365006	cuttings
19171	Salix purpurea gracilis	45 plants
21365	Senecio tamoides PI-365142	stolons
19154	Spirea fritschiana PI-317285	2 plants
21373	Urochloa mosambicensis PI-365076	stolons
21381	Urochloa mosambicensis PI-365084	stolons
21382	Urochloa mosambicensis PI-365085	stolons
21383	Urochloa mosambicensis PI-365086	stolons
21384	Urochloa mosambicensis PI-365087	stolons
21385	Urochloa mosambicensis PI-365088	stolons
21999	Urochloa rhodesiensis PI-365089	stolons
22376	Urochloa stolonifera PI-365517	stolons

National Plant Materials Center

Bulk Seed Shipments 1972

BN No.	Species	Amount
-	Cynodon dactylon FC-40408	1 lb.
5225	Panicum coloratum 'Selection 75'	1 lb.
20427	Pinus sp. PI-362153	$\frac{1}{2}$ lb.
2279	Lespedeza bicolor 'Natob'	$12\frac{1}{2}$ lbs.
3532	Lespedeza thunbergii	20 lbs.
7127	Lotus pedunculatus v. villosus 'Beaver'	2 lbs.

National Plant Materials Center

Foreign Distribution in 1972

<u>Country</u>	<u>Number</u>
Australia.....	3 seed packets
Argentina.....	5 seed packets
Brazil.....	1 seed packet
Canada.....	12 seed packets
Czechoslovakia.....	5 cuttings
Dakar.....	8 seed packets
England.....	24 seed packets
Ethiopia.....	5 seed packets
France.....	8 seed packets
Germany.....	5 seed packets
India.....	1 seed packet
Iraq.....	11 seed packets
Iran.....	20 seed packets
Japan.....	105 seed packets
Korea.....	32 seed packets
Mexico.....	5 seed packets
New Zealand.....	13 seed packets
Nigeria.....	1 seed packet
Norway.....	5 seed packets
Poland.....	88 seed packets
Portugal.....	1 seed packet
South Africa.....	3 seed packets
South America.....	7 seed packets
Spain.....	1 seed packet
West Indies.....	11 stolons

National Plant Materials Center

1972 Seed Production

Grasses

GENUS

Species	BN No.	PI No.	Original Source	Amount of Seed
AGROPYRON				
desertorum	19314	345583	U.S.S.R.	116.2 gm.
desertorum	19315	345584	U.S.S.R.	11.5 gm.
intermedium	19317	345586	U.S.S.R.	19.8 gm.
cf. leptourum	17405	314199	U.S.S.R.	1.1 gm.
cf. leptourum	17412	314208	U.S.S.R.	trace
pectiniforme	17594	315359	U.S.S.R.	26 gm.
pectiniforme	18615	325185	U.S.S.R.	1.9 gm.
pectiniforme	18616	325186	U.S.S.R.	50.5 gm.
pectiniforme	18617	325187	U.S.S.R.	23.8 gm.
pectiniforme	18724	326204	U.S.S.R.	15.6 gm.
pectiniforme	18725	326205	U.S.S.R.	13.3 gm.
scabriglume	20477	--	Argentina	7.6 gm.
sibiricum	18614	325184	U.S.S.R.	25.7 gm.
trachycaulum	19806	358309	Canada	5.8 gm.
AGROSTIS				
alba	19351	345948	Norway	3.2 gm.
ALOPECURUS				
geniculatus	19352	345949	Norway	0.4 gm.
pratensis	11186	266006	Poland	16 gm.
pratensis	18176	319815	Norway	0.3 gm.
pratensis	19353	345950	Norway	2.8 gm.
pratensis	19551	348859	Belgium	2.1 gm.
ventricosus	18733	326213	U.S.S.R.	29 gm.
ANDROPOGON				
scoparius	16236	216751	Texas	0.6 gm.
scoparius	16237	216752	Texas	2.1 gm.
scoparius	16240	216778	Texas	10.6 gm.
scoparius	19834	216747	Texas	142.9 gm.
scoparius	19835	216748	Texas	69.3 gm.
scoparius	19837	216754	Texas	47.3 gm.
scoparius	19839	216760	Texas	3.9 gm.
scoparius	19840	216761	Texas	7.6 gm.
scoparius	19841	216764	Texas	13.7 gm.
scoparius	19842	216766	Texas	29 gm.
scoparius	19843	216767	Texas	3.9 gm.
scoparius	19844	216770	Texas	3.6 gm.
scoparius	19845	216779	Texas	6.4 gm.
scoparius	19846	216781	Texas	19.3 gm.
scoparius	19847	216785	Texas	0.3 gm.
scoparius	19848	216786	Texas	14.3 gm.
scoparius	19849	216787	Texas	11.9 gm.

1972 Seed Production - Grasses

GENUS				Amount
Species	BN No.	PI No.	Original Source	of Seed
ARRHENATHERUM				
elatus	19357	345954	Norway	9 gm.
elatus	19358	345955	Norway	4.2 gm.
ARISTIDA				
plumosa	15856	--	Tunisia	1.3 gm.
AXONOPUS				
compressus	20991	365101	Swaziland	1.7 gm.
BOTHRI OCHLOA				
glabra	19176	209168	South Africa	803.1 gm.
glabra	19921	208915	South Africa	4.5 gm.
glabra	19936	266194	South Africa	18.6 gm.
ischaemum	4419	--	Afghanistan	0.8 gm.
ischaemum	18832	330699	Iran	22.6 gm.
ischaemum	19917	173636	Turkey	2.9 gm.
ischaemum	19918	174040	Turkey	10 gm.
ischaemum	19933	245727	Turkey	1.6 gm.
ischaemum	19934	245728	Turkey	2.5 gm.
ischaemum	20523	--	Versailles, France	9.2 gm.
ischaemum v. songarica	19919	174042	Turkey	220 gm.
BRACHYPODIUM				
pinnatum	19367	345964	Norway	6.1 gm.
pinnatum	18628	325215	U.S.S.R.	22.5 gm.
pinnatum	18629	325216	U.S.S.R.	2 gm.
sylvaticum	19271	344569	Czechoslovakia	4.7 gm.
BROMUS				
biebersteinii	19160	341222	Canada	59.7 gm.
biebersteinii	19161	341223	Canada	102.8 gm.
brevis	20538	--	Uruguay	27.3 gm.
inermis	18738	326262	U.S.S.R.	12.3 gm.
inermis	19162	341224	Canada	240.7 gm.
inermis	19163	341225	Canada	193.5 gm.
inermis	19164	341226	Canada	126.5 gm.
inermis	19165	341227	Canada	253 gm.
inermis	19166	341228	Canada	89.7 gm.
inermis	19369	345966	Norway	404.7 gm.
marginatus	20557	--	Versailles, France	312.7 gm.
stamineus	9682	251107	Yugoslavia	42 gm.
willdenowii	19370	345967	Norway	513.8 gm.
sp.	9841	--	Yugoslavia	8.9 gm.
sp.	19272	344570	Czechoslovakia	78.1 gm.
sp.	20553	378046	South Argentina	1.4 gm.

1972 Seed Production - Grasses

GENUS				Amount
Species	BN No.	PI No.	Original Source	of Seed
CALAMAGROSTIS				
arundinacea	12525	283206	Australia	1.5 gm.
arundinacea	18635	325239	U.S.S.R.	14.2 gm.
arundinacea	19371	345968	Norway	3.9 gm.
neglecta	19377	345974	Norway	trace
pseudophragmites	19710	222277	Afghanistan	26.7 gm.
purpurea	19378	345975	Norway	.01 gm.
CATAPODIUM				
patens	20580	378047	Portugal	39.8 gm.
rigidum	20581	378048	Versailles, France	1 gm.
DACTYLIS				
glomerata	18646	325301	U.S.S.R.	2.8 gm.
glomerata	18647	325302	U.S.S.R.	5.5 gm.
marina	19484	346967	Wales	2.8 gm.
marina	19485	346968	Wales	7.8 gm.
marina	19486	346969	Wales	0.3 gm.
marina	19487	346970	Wales	0.4 gm.
marina aff. marina	20599	--	Versailles, France	5.5 gm.
DEYEUXIA				
avenoides	20604	378049	New Zealand	5.9 gm.
ELYMUS				
arenarius	18180	319819	Norway	10 gm.
arenarius	19381	345978	Norway	4.1 gm.
arenarius	19382	345979	Norway	3 gm.
arenarius	19557	348865	Belgium	12.9 gm.
agropyroides v. latiglume	20608	378050	Chile	0.3 gm.
condensatus	20613	--	Versailles, France	21.4 gm.
curvatus	20614	--	Versailles, France	13 gm.
cf. interruptus	20616	--	Versailles, France	192.3 gm.
junceus	20617	--	Versailles, France	16.9 gm.
patagonicus	20618	--	Argentina	trace
sibiricus	18654	325315	U.S.S.R.	trace
sibiricus	18742	326266	U.S.S.R.	3.3 gm.
triticoïdes	20622	--	Versailles, France	9.9 gm.
wiegandii	20624	--	Canada	0.4 gm.
sp.	20625	378053	Argentina	0.3 gm.
ERAGROSTIS				
curvula	5107	164917	South Africa	trace
curvula	5108	164918	South Africa	50.7 gm.
curvula	14830	295698	South Africa	29 gm.
curvula	15504	299914	South Africa	25.3 gm.
curvula	19670	ex203347	Arizona A.E.S.	50.3 gm.

1972 Seed Production - Grasses

GENUS				Amount
Species	BN No.	PI No.	Original Source	of Seed
ERAGROSTIS				
curvula	19708	220586	Afghanistan	79.7 gm.
curvula	19832	208994	South Africa	2.5 gm.
curvula	21733	364808	South Africa	77.4 gm.
curvula	21734	364809	South Africa	179.9 gm.
curvula	21735	364810	South Africa	21.2 gm.
curvula v.				
conferta	4189	155434	South Africa	13.8 gm.
domingensis	20627	--	Versailles, France	303 gm.
ferruginea	12589	283273	Australia	8.9 gm.
gummiflua	21694	364339	Lesotho	1.4 gm.
horizontalis	21736	364814	South Africa	20 gm.
horizontalis	21737	364815	South Africa	0.8 gm.
horizontalis	21738	364816	South Africa	13.3 gm.
lappula	21695	364360	Mozambique	1.6 gm.
lehmanniana	21740	364818	South Africa	2 gm.
lehmanniana	21741	364819	South Africa	26 gm.
lehmanniana	21742	364820	South Africa	17.6 gm.
lehmanniana	21743	364821	South Africa	16 gm.
pilosa	20629	378082	Versailles, France	4.4 gm.
pseudosclerantha	21728	364822	South Africa	2.9 gm.
rigidior	21730	364823	South Africa	13 gm.
rigidior	21731	364824	South Africa	0.3 gm.
rotifer	21732	364825	South Africa	43.5 gm.
FESTUCA				
arundinacea	19177	--	Georgia PMC	1.4 gm.
arundinacea	19475	--	New York PMC	14.5 gm.
arundinacea	19476	--	New York PMC	2.2 gm.
longifolia	19283	344581	Czechoslovakia	41.8 gm.
ovina	19385	345982	Norway	54.7 gm.
rubra	19090	--	Rhode Island A.E.S.	63.8 gm.
rubra	19387	345984	Norway	192 gm.
rubra	19434	346031	Norway	20.4 gm.
JUNCUS				
maritimus	19674	351149	Israel	0.3 gm.
KOELERIA				
caudata v.				
algeriensis	18852	345744	Spain	6.7 gm.
MELICA				
altissima	18668	325417	U.S.S.R.	24.1 gm.
altissima	18669	325418	U.S.S.R.	60.8 gm.
cupanii	18837	330710	Iran	12.5 gm.
taurica	18670	325419	U.S.S.R.	71.6 gm.

1972 Seed Production - Grasses

GENUS Species	BN No.	PI No.	Original Source	Amount of Seed
MUHLENBERGIA				
glomerata	20723	--	Canada	0.4 gm.
sylvatica	20724	--	Canada	9.8 gm.
ORYZOPSIS				
miliacea	20732	--	Versailles, France	0.6 gm.
PANICUM				
antidotale	9971	220026	Afghanistan	0.5 gm.
antidotale	11480	268410	Afghanistan	trace
antidotale	15897	204906	Turkey	79 gm.
antidotale	15900	219609	Pakistan	1.9 gm.
antidotale	20210	269944	West Pakistan	10.7 gm.
antidotale	20211	308603	Italy	trace
clandestinum	18572	--	Tennessee	98.2 gm.
virgatum	8630	--	North Carolina	152.3 gm.
virgatum	8632	--	North Carolina	282.6 gm.
virgatum	9288	--	North Carolina	82.5 gm.
virgatum	10825	--	Florida PMC	2 gm.
virgatum	10826	--	Florida PMC	2.4 gm.
PASPALUM				
cromyrorhizon	16628	310061	Brazil	167.2 gm.
cromyrorhizon	16632	310065	Brazil	26.7 gm.
cromyrorhizon	16638	310071	Brazil	9.2 gm.
cromyrorhizon	19616	276242	Uruguay	15.6 gm.
cromyrorhizon	19617	303967	Brazil	9.8 gm.
scrobiculatum	19619	349653	India	22.5 gm.
PENNISETUM				
orientale	18844	330717	Iran	0.4 gm.
PHALARIS				
aquatica	13170	284219	Australia	5 gm.
aquatica	13176	284225	Australia	4.1 gm.
aquatica	13908	289670	Spain	29 gm.
arundinacea	19418	346015	Norway	3.7 gm.
canariensis	20739	378054	Versailles, France	2 gm.
PHLEUM				
pratense	19565	348873	Belgium	3.7 gm.
pratense	19419	346016	Norway	30.5 gm.
POA				
angustifolia	19420	346017	Norway	65 gm.
compressa	19421	346018	Norway	38.8 gm.
compressa	19424	346021	Norway	46.3 gm.
glauc	19423	346020	Norway	0.5 gm.
pilcomayensis	18922	337592	Argentina	trace
pratensis	12927	283961	Australia	0.3 gm.
pratensis	18788	330632	Poland	55.7 gm.

1972 Seed Production - Grasses

GENUS Species	BN No.	PI No.	Original Source	Amount of Seed
POLYPOGON				
maritimus	20780	--	Versailles, France	0.5 gm.
monspeliensis	19705	206883	Turkey	11.1 gm.
PUCCINELLIA				
distans	20783	--	Versailles, France	3.2 gm.
festucaeformis	20785	--	Versailles, France	0.5 gm.
SCHIZACHYRIUM				
scoparium	15991	213876	Rhode Island	6.4 gm.
SESLERIA				
coerula	19435	346032	Norway	19 gm.
SETARIA				
italica	13976	290461	Hungary	trace
woodii	10147	209216	South Africa	5.9 gm.
woodii	21659	365018	South Africa	10.2 gm.
woodii	21660	365019	South Africa	19.9 gm.
SORGHASTRUM				
nutans	19831	--	Nebraska A.E.S.	77.5 gm.
SORGHUM				
vulgare	12404	--	Iowa A.M.S.	6.5 gm.
vulgare	12405	--	Iowa A.M.S.	1.109 kg.
vulgare	12406	--	Iowa A.M.S.	730 gm.
STIPA				
tenacissima	20811	378056	Versailles, France	2.4 gm.
sp.	20810	378084	Versailles, France	trace
STIPAGROSTIS				
uniplumis	21672	365034	South Africa	0.4 gm.

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1972 Seed Production

Legumes and Other

GENUS Species	BN No.	PI No.	Original Source	Amount of Seed
ASTRAGALUS				
cicer	19268	344565	Czechoslovakia	1.2 gm.
frigidus	19360	345957	Norway	0.1 gm.
glycyphyllos	19362	345959	Norway	9.1 gm.
ATRIPLEX				
hortensis	19365	345962	Norway	30.4 gm.
nitens	19366	345963	Norway	2.5 gm.
BOSSIAEA				
buxifolia	6288	186285	Australia	0.1 gm.
CORONILLA				
varia	19275	344573	Czechoslovakia	5.5 gm.
DESMODIUM				
intortum	21812	364511	South Africa	trace
sp.	20409	349571	New Guinea	trace
HYPERICUM				
androsaemum	19392	345989	Norway	2.1 gm.
rumelicum	19399	345996	Norway	16.4 gm.
LATHYRUS				
japonicus v. glabra	4320	315704	Oregon	4.1 gm.
LESPEDeza				
bicolor	2279	--	NPMC	10 lbs.
x divaricata	18013	318639	Korea	45.2 gm.
inschanica	18014	318640	Korea	229.3 gm.
thunbergii	3532	--	NPMC	65 lbs.
thunbergii	13630	286481	Japan	20.2 gm.
tomentosa	6275	186173	Japan	26 gm.
virgata	19615	349428	Korea	45.7 gm.
LOTUS				
caucasicus	18660	325370	U.S.S.R.	0.5 gm.
caucasicus	18662	325372	U.S.S.R.	0.5 gm.
caucasicus	18664	325374	U.S.S.R.	1.9 gm.
corniculatus	18183	319822	Norway	2.1 gm.
LUPINUS				
mutabilis	13803	--	Hungary	10.2 gm.
mutabilis	16372	308050	Czechoslovakia	15.1 gm.
mutabilis	17826	316290	Australia	7.8 gm.
MEDICAGO				
sp.	9930	ex28646	Virginia	trace

1972 Seed Production - Legumes and Other

GENUS Species	BN No.	PI No.	Original Source	Amount of Seed
ONONIS				
columnae	19415	346012	Norway	trace
SANGUISORBA				
minor	19430	346027	Norway	3.5 gm.
SENECIO				
tamoides	21365	365142	Swaziland	0.1 gm.
TERAMNUS				
labialis	14719	--	Unknown	trace
TRIFOLIUM				
ambiguum	4529	--	Canada	trace
elongatum	14731	253200	Yugoslavia	2.5 gm.
fragiferum	15243	297985	Australia	trace
fragiferum	15422	231086	Turkey	1.9 gm.
fragiferum	18700	325500	U.S.S.R.	0.2 gm.
glomerata	19442	346039	Norway	38.7 gm.
pannonicum	19448	346045	Norway	47 gm.
repens	17035	311495	Spain	5 gm.
rubens	17380	314123	U.S.S.R.	0.8 gm.
VICIA				
angustifolia	14187	121275	Turkey	175.8 gm.
angustifolia	14195	239351	Australia	38.9 gm.
baicalensis	21884	378090	U.S.S.R.	7.9 gm.
canescens	19330	--	Turkey	trace
cracca	19332	--	Turkey	trace
exigua	21863	--	California	66.2 gm.
minutiflora	20421	--	Arkansas	9.9 gm.
minutiflora	20425	--	Alabama	30 gm.
variegata	18966	--	U.S.S.R.	4.3 gm.
sp.	21865	--	India	30.6 gm.
sp.	21878	--	India	22.9 gm.
sp.	21882	--	Brazil	1.4 gm.
sp.	21899	--	Chile	14.9 gm.

KEY TO SYMBOLS IN TABLES AND IN NOTES AND COMMENTS

PI	Stems		Spring Recovery		Leaves	
	Number	Thickness	Habit	Time	Amount	Number
	A-Abund.	C-Coarse	E-Erect	E-Early	A-Abund.	A-Abund.
	M-Mod.	M-Med.	SE-Sub-erect	L-Late	M-Medium	M-Mod.
	F-Few	F-Fine	P-Prostrate		S-Sparse	F-Few
						S-Soft
						WD-Well Distributed
<u>Size at Maturity - Grasses:</u>						
	Stem Height - Leaf Height x Plant Width					
	<u>Size at Maturity - Legumes and Other:</u>					
	Plant Height x Plant Width					
				<u>Vigor</u>	<u>Leaf Spot</u>	<u>Bloom</u>
				E-Excellent	L-Light	Month
				G-Good	M-Medium	Month
				F-Fair	S-Severe	
				P-Poor		
				<u>Density</u>	<u>Rating and Notes</u>	
				VD-Very Dense	Self Explanatory	
				D-Dense		
				M-Mod.		

